TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 9 **May, 1943** **Number 5**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Allen, Hugh. House of Goodyear. Ed.2, revised. 417p. Goodyear Tire & Rubber Co., Akron, Ohio, $2.

Rubber age, March 1943, p.530. ½ col.

"Although . . . this . . . is the story of the birth and growth of the tremendous Goodyear organization, it is also the story, very well told, of rubber which, as the genial Mr. Allen puts it, has been 'taken from the laboratory . . . and put on the front page of the nation's newspapers.' As Mr. Allen so ably says, rubber is no longer an academic question. Therefore although the book is written primarily for the internal industry audience, it contains phases of much wider interest. The current edition brings up-to-date the ever-fascinating tale of rubber from its earliest history to its growth as a billion dollar industry transferred bodily from one hemisphere to another and now starting back, from the smuggling of seeds out of Brazil by Wickham in 1876 by tramp steamer to the delivery of seedlings by Clipper planes in 1941. The many international struggles for the control of rubber are exceptionally well handled and clearly portrayed for the non-initiate."

Allen, John Stuart, and others. Atoms, rocks, and galaxies. Revised edition. 719p. 1942. Harper, New York, $3.75.

Journal of chemical education, April 1943, p.207. 1 col.

"This very solid book has been developed over the last dozen years to serve as the text in the survey course in physical science at Colgate University . . . An enormous amount of factual material is presented and well tied together with sound theory. The chemistry is well selected and its treatment is authentically modern . . . Should be required reading for all liberal arts students who are planning to fulfil the science requirements for their degree by taking a biological science only, and is highly recommended to the attention of anyone giving a survey course including any of the four fields which it covers." *Ewing C. Scott.*

Aluminum Company of America. Welding and brazing alco aluminum. New edition. 100p.

Combustion, March 1943, p.50. ½ col.

"A well-written and admirably illustrated . . . booklet designed to meet the needs of the practical welder. Specific instructions are given concerning the commercially important processes which are: (1) fusion welding, including the use of gas, metal arc, automatic and manual carbon arc, and automatic hydrogen; and (2) electric-resistance welding, which includes spot-, seam-, and butt-flash-welding methods . . . Contains many useful tables and is liberally illustrated with line diagrams and photographic halftones."

American Society for Testing Materials. Tables of data on chemical compositions, physical and mechanical properties of wrought corrosion resisting and heat resisting chromium and chromium nickel steels. 44p. The Society, Philadelphia, $1.25 unbound.

Heating, piping & air conditioning, March 1943. p.132. ½ col.

"An effort has been made to give the data in condensed form and to cover material in widest commercial usage. The first part pertains to wrought chromium steels, 4 to 6 per cent, 8 to 10 per cent chromium, etc., while the second part covers wrought chromium nickel steels up to 25 per cent chromium, 20 per cent nickel. All told, there are 21 extensive but compact tables and 26 charts and curves covering important data such as chemical composition, physical properties, forging and heat treating practices, and mechanical properties of steels. There is information on creep characteristics and short time tensile properties. This latest publication is the third in the series on stainless steels issued through the work of the society — the first two having been published in 1924 and in 1930."

American Zinc Institute, Inc. Zinc in wartime. 26p. The Institute, New York, gratis.

Engineering and mining journal, March 1943, p.84. 8 l.

"A booklet, mainly pictorial, illustrating the numerous applications of zinc in the war economy. Although designed primarily to acquaint the public with the usefulness of zinc, the booklet should also be useful as a spur to the morale of workers engaged in zinc production."

Metal finishing, March 1943, p.157. 12 l.

"[Contains] few statistics but hundreds of photographs, most of them official army and navy pictures. These photographs, together with the accompanying text, describe the many military and essential civilian uses to which zinc is put today. Few realize the importance of zinc in the war effort. It is believed 'Zinc in Wartime'

will prove interesting and informative not only to those closely allied to the industry, but to the public generally."

Andrews, Albert H., jr. Manual of oxygen therapy techniques. 191p. 1943. Year Book Publications, Chicago, $1.75. (General practice manuals.)

Ohio state medical journal, April 1943, p.394, 396. 7 l.

"Put forward to emphasize details so often overlooked in the use of oxygen therapy. This little manual is limited to a discussion of the technique only, so that in view of the free use of oxygen now made in hospitals, this is a book we should all read if we want to get the most out of our oxygen tents in the treatment of our patients."

Arenson, Saul B. How to solve problems in quantitative analysis. Revised and enlarged edition. 89p. 1942. Crowell, New York, 75c.

Journal of the American Chemical Society, April 1943, p.742. ¼ col.

"The author has retained in the text sections the conversational conference style of the earlier edition, while presenting logarithms and significant figures, gravimetric calculations of all sorts, acidimetry work including double indicator titrations, oxidimetry (with permanganate, iron, calcium, dichromate, iodine, thiosulfate, copper and sulfur), and a short section of precipitation titrations. The discussion is written in very understandable form, with good illustrative examples. Work for the student is provided by 272 problems, the answers being given without decimal points." *Allen D. Bliss.*

Arey, Charles K. The airport. 35p. 1943. Macmillan, New York, 40c. (Air-age education series.)

Aeronautical engineering review, March 1943, p.101. ⅓ col.

"In brief outline it provides information about all phases of the airport . . . its development, its light and their meanings, facts about traffic control in the air. It describes radio-traffic control, explains the functions of an airport meteorologist, and tells how planes are loaded . . . It is suggested that, in addition to providing a source of information, the contents of this book are particularly valuable for supplementary work in history, English, and science classes."

Aschner, Bernard. Art of the healer; translated from the German by Ruth Norden and Heinz Norden. Dial Press, New York, $2.75.

Ohio state medical journal, April 1943, p.396. 10 l.

"The author sets forth in understandable language the means we have at our disposal for prolonging life within biological limitations. It is his thesis that there is a huge treasury of unused healing powers which might well enrich modern medicine. These he develops into a system which he calls constitutional therapy. For one who wants to get away from slavery to laboratory technique this book is extremely stimulating and thought provoking."

Associated General Contractors of America. Conservation of construction equipment and facilities. 84p. The Author, Munsey Building, Washington, D. C.

Concrete, March 1943, p.26. ⅔ col.

"Designed for use by key men directly responsible for the operation and maintenance of equipment and critical materials . . . A reference list is included, giving the names of manufacturers of various kinds of equipment, from whom further literature and suggestions may be obtained in connection with maintenance of their equipment."

Baeza, Walter J. Course in powder metallurgy. 209p. Reinhold, New York, $3.50.

American machinist, April 1, 1943, p.133. ½ col.

"Powder metallurgy has developed rapidly during the past few years. The future will no doubt see the extended use of powdered metals, and the data presented in this book should be of interest to those contemplating their application. The book, divided into three sections, will be valuable as a source of material for instructors, a textbook for students, and as a guide to industrial organizations planning a research or development laboratory."

Tool engineer, Feb. 1943, p.210. ¼ col.

"This book is said to be written for a fast-developing field. It may be divided into three sections: (1) The history of powder metallurgy and laboratory and plant processes are covered, with the theory underlying the processes clearly described . . . (2) Practical suggestions for assigning experiments, in which a minimum of equipment serves a maximum number of students are contained there. (3) This section outlines 15 experiments, describing the object, procedure and equipment of each, indicating its significance and relation to the theories discussed earlier."

Barber, Charles William. Illustrated outline of weather science. 248p. 1943. Pitman, New York, $2.50.

Aeronautical engineering review, March 1943, p.103. ⅜ col.

"A survey of meteorology essentials . . . Offers a study of the science of weather based upon a proved approach developed at the Naval Air Base, Lakehurst, N. J. Comprehension of its subject matter is assisted by illustrations, supplementary tables, map problems and questions for examination and study."

Aviation equipment, March 1943, p.122. 12 l.

"A complete chapter by chapter treatment of the various elements that make the weather. It includes the description of air masses, pressure phenomena and winds, humidity, atmospheric thermal relationships, weather map analysis and forecasting, fog conditions, etc. At the end of each chapter there is a series of questions based on the foregoing information; and the whole book is well illustrated with maps and charts."

Barger, Harold, & **Landsberg,** H. H. American agriculture, 1899-1939; a study of output, employment and productivity. 435p. 1942. National Bureau of Economic Research, Inc., New York, $3.

Food industries, April 1943, p.123. 1 col.

"A wealth of information on the production trends of raw materials of food processors . . . The information is presented in readable style and not as stodgy statistics so often compiled for a report of this type . . . In discussing the outlook for agriculture, the report examines the prospects for increased exports, larger production of protective foods and new industrial uses for oils, fibers and other farm products."

Bateman, Alan M. Economic mineral deposits. 898p. 1942. Wiley, New York, $6.50.

American journal of science, April 1943, p.270. 1⅓ p.

"Presents a comprehensive account of the mineral deposits, their occurrence and form . . . Designed primarily as an elementary textbook, but should prove a distinct aid to the mining geologist in that it places considerable emphasis on the practical viewpoint . . . The general plan and arrangement of subject matter are excellent; the literary style is not overly technical . . . Should prove to be a valuable handbook to economic geologists and is a desirable addition to introductory textbooks in the subject." *Ralph E. Digman.*

Engineering and mining journal, March 1943, p.84. ⅜ col.

"Designed primarily as a textbook for advanced students in economic geology, this volume will be recognized as a milestone along the road of economic geology education. Although the work is adapted to the use of students less advanced than in the case of Lindgren's classic, the treatment presupposes a general background in geology hardly less than that of senior students majoring in the science. Being designed for less advanced readers, the book treats ore deposits according to their shape and disposition rather than genetically, for which reason it may receive some criticism from mature geologists . . . In addition to being a textbook, the work will certainly find its way into most libraries of economic geology, and will be found useful for 'refresher' purposes by mature geologists and mining men."

Bebie, Jules. Manual of explosives, military pyrotechnics and chemical warfare agents. 171p. Macmillan, New York, $2.50.

Bulletin of the Electrochemical Society, Inc., March 1943, p.10. ⅜ col.

"With the present emphasis on explosives and chemical warfare agents, a need was felt for some work that would clearly and concisely describe the common and important materials used in the past and in use at present. This volume has done that and more; for in addition, the author has given the composition, properties and uses of each substance listed, and has added to the value of his descriptions by giving the names and symbols used by other nations . . . Any individual who has anything to do with the technical manufacture, assembly, control or uses of military materials would do well to at least read the volume to become acquainted with those items specifically applying to him." *Joseph S. Smatko.*

Chemical & metallurgical engineering, March 1943, p.195. ¼ col.

"Although it is called a manual of explosives, this book is really a dictionary. There are listed some 500 military and industrial explosives and war chemicals used both for offense and defense. The entries include items of current and historical interest and are listed alphabetically with information on composition, symbol, properties and uses. Cross references to chemical names and synonyms, American and foreign trade names, and warfare symbols enable quick location of information."

Chemical industries, March 1943, p.377. ½ col

"A welcome and much needed addition to the literature on explosives . . . Also particularly timely for right now there is an urgent need to train technical men in large numbers as quickly as possible and this book will be a real time saver . . . It is regrettable, in the humble opinion of this reviewer, that Dr. Bebie who writes so lucidly on such a complicated subject, did not enlarge his introduction. More details on the general chemistry of explosives would add to the already considerable value of the book." *Frederick A. Hessel.*

Billings, J. Harland. Applied kinematics. Ed.2, rewritten. 320p. 1943. Van Nostrand, New York, $3.25.

Machine design, March 1943, p.158. ⅓ col.

"Although described as a second edition, this book has been so completely rewritten that it almost constitutes a new book. In particular, acceleration is much more extensively covered than in the earlier edition, and the effect known as Coriolis' law is discussed in a more practical manner than is the case in most works on the subject. That branch of design known as kinematics or motion analysis has too long been the prerogative of a small group of engineers. With books like this one readily available there is no longer reason to design any mechanism without full and complete analysis of the effects of motion."

Power, March 1943, p.122. ¼ col.

"Considerably extends the treatment of some topics. Much illustrative problem material has been added and special attention is given to graphical methods. This book is thoroughly practical in approach. It plays up the principles of kinematics without extensive mathematics and shows the applications to innumerable commercial machines. Should be of definite interest to teachers and practicing engineers, as well as to students."

Booher, Lela E., and others. Vitamin values of foods. 244p. 1942. Chemical Pub., Brooklyn, $2.75.

Food industries, April 1943, p.123. ⅓ col.

"Prepared for dietetic and nutrition specialists, and based on information obtained from original published reports, this publication summarizes in tabulation form the vitamin content of foods. Included in this record are values for 100-gram edible, portions for vitamin A, thiamin, ascorbic acid, vitamin D and riboflavin. These are determined in terms of absolute weights or directly in terms of International Units."

Braude, Felix. Adhesives. 154p. 1943. Chemical Pub., Brooklyn, $3.

Canadian chemistry and process industries, March 1943, p.172. ½ col.

Paper trade journal, March 18, 1943, p.34. 7 l.

"Written for the practical man who is interested in adhesives either as a producer, consumer or salesman . . . Not intended for the technical specialist . . . Covers tests, raw materials, starch, casein, glues, sodium silicate, rubber dispersions, gum, rosin, wax and putties and is essentially a formula book."

Rubber age, March 1943, p.530. 12 l.

"The subject is presented from the practical point of view with a minimum of theoretical discussion and, following the author's purpose, in non-technical language . . . The book has 19 chapters in all, including one devoted to rubber adhesives and another to rubber dispersions and solutions as adhesives. A carefully cross-referenced index is included."

Brenke, William C. Spherical trigonometry. 92p. Dryden, New York, 80c.

Western flying, March 1943, p.138. ⅓ col.

"This is part of the book 'Plane and Spherical Trigonometry' by Professor Brenke, which will soon be published . . . Intended to furnish a general background for the understanding and intelligent use of extensive tables and computing devices which largely obviate the use of formulas and reduce computations to a minimum in marine and air navigation. The treatment is in two sections. In the first, the formulas are derived and applied to the solution of spherical triangles; in the second, the applications are presented, principally in navigation and nautical astronomy. Considerable attention is given to the use of the haversine, so that the student may become familiar with the use of this important function."

British Standards Institution. British standards for workshop practice. The Institution, 28 Victoria St., London, S.W.1, 7s. 6d.

Sheet metal industries, Feb. 1943, p.274. 1 col.

"The need for standardisation was never greater than at present . . . This comprehensive book will be of great assistance in this work. Among the specifications covered are: Standard Screw Threads and their Tolerances; Limits and Fits for Plain Shafts and Holes; Tolerances for Gauges for both Plain and Threaded Work; Serrations and Splines; Milling Cutters, Twist Drills and Reamers; Keys and Key-ways; Ball and Roller Bearings; Morse and B. and S. tapers, and Drill Jig Bushes. Where there are war-time restrictions, these are mentioned in the appropriate place in the text. There is also a summary of British Standard Steels for use in the present emergency and a very informative

section on cast iron."

Brown, Louise Bush-. See **Bush-Brown,** Louise.

Brunschwig, Alexander. Surgery of pancreatic tumors. Mosby, St. Louis, $7.50.

Ohio state medical journal, March 1943, p.302. ⅓ col.

"Presents what is known about the most exciting field of surgery. Both benign and malignant tumors and their treatment is discussed in full. Most of the staff of the University of Chicago whose work has touched upon this subject have been enlisted in aiding its presentation. Dr. Alan O. Whipple of Columbia has made available to the author his unique series of records of personal and collected cases. It therefore becomes *the book* on the subject and should be in every medical library and in the intern library of every well organized hospital. It is a reference book. These tumors do not occur frequently but this book should always be handy."

Bush-Brown, Louise, & **Bush-Brown,** James. America's garden book. 1222p. Scribner, New York, $3.50.

American forests, April 1943, p.184. ½ col.

"The authors have attempted to meet the needs of urban, suburban, and real country dwellers for accurate information on all phases of gardening. This book is not confined to the making of flower and vegetable gardens, but includes the latest and most approved methods and practices of gardening activities in the fullest sense of the word . . . Contains thirty-four chapters of well-written information . . . Replete with a garden calendar, maps of growing conditions and frost dates, glossary, and index."

Calderwood, Carmelita. Orthopedic nursing; content and method of the teaching program in schools of nursing. 1942. Joint Orthopedic Nursing Advisory Service, 1790 Broadway, New York, gratis.

Public health nursing, March 1943, p.165. ½ col.

"Written with knowledge and understanding, Miss Calderwood's pamphlet constitutes a challenge to all nurses, but especially to nurses responsible for the education of the student nurse. Throughout the book emphasis is placed on the process of integration and teaching orthopedic implications in all nursing services as they present themselves to the student in actual nursing situations." *Mary Ferguson.*

Cartwright, Catherine, and others. Bibliography of aviation education materials. 139p. 1942. Macmillan, New York, 88c.

Aeronautical engineering review, March 1943, p.107. ⅓ col.

"There is such a constant demand for lists of books about aviation that this compilation will render a valuable service. The classified bibliography will give teachers and students lists in various fields that have been carefully selected. The general lists give a short summary of each of the recommended books, enough to let anyone know whether they would be useful for personal use or in libraries."

Castle, Drew W. Problems in blueprint reading. Revised edition; edited by R. W. Selvidge. 93p. Manual Arts Press, Peoria, Ill., 96c.

Aero digest, March 1943, p.510. 1 col. including an illustration.

Aviation, March 1943, p.305. 8 l.

"This introduction on how to read blueprints does not require any preliminary instruction in mechanical drawing, but does employ freehand sketches (and questions) to increase the student's absorption of the chief points of the 33 problems which follow the explanatory text."

Modern machine shop, Feb. 1943, p.356. ⅝ col.

"Designed to provide a fast and practical method for instructing apprentices, machine workers, and others in blueprint reading without necessitating instruction in mechanical drawing. Written in a clear, easy-to-understand manner, the book includes data on the fundamentals of the language of drafting — what the symbols mean, how they are put together, and so on — followed by a series of working drawings or problems taken from industry. In presenting the problems, the author has developed a unique plan which makes it possible to check instantly and accurately the ability of the student to read each drawing and enables the teacher to determine the exact character of the student's difficulty. The plan is, in a large measure, self-checking and enables the student in most cases to determine whether his own work is correct or not."

Western flying, March 1943, p.138. ⅓ col.

Chain Belt Company. Pumpcrete practice. 164p. The Company, Milwaukee, Wis.

Concrete, March 1943, p.27. ½ col.

"A most commendable piece of industrial literature. Essentially, the book consists of a series of illustrated magazine articles describing the use of pump-and-pipe-line systems for distributing concrete on construction projects. All phases of this type of distribution, known as the *Pumpcrete* system, are included in the article reproduced. These stories include plant layout, descriptions of the placing and compactment of pumped concrete, and the unit cost of this method of distributing concrete."

Chapin, M. K. Why men can fly. 338p. 1943. Reynal, New York, $2.50.

Aeronautical engineering review, March 1943, p.103. ⅔ col.

"This book has a much broader base than an explanation of the operation of aircraft. The author gives, in simple and clear nontechnical language, the fundamentals of the sciences from which flying derived its power. This is an excellent way to get a broader conception of the principles of flying . . . One of the most interesting and informative aeronautical books of the year."

Chapman, Paul W. See **Duncan,** Amon Ocyrus.

Clark, John A., and others. Fundamentals of machines. 300p. 1943. Houghton, Boston, $1.24.

Science counselor, March 1945, p.36. ⅓ col.

"Expected to give those who study it a knowledge of mechanics that will enable them to operate machines safely and effectively. It should do so. It is based on the official outline for pre-induction courses in machines . . . Should help considerably in the war effort — its primary aim — by providing better trained workmen who may later become specialists in the Army air and ground forces or in the services of supply. Written in simple language, set in attractive type faces, and illustrated with many half-tones and drawings, it is an example of good modern book writing and book making." *A. K.*

Clemensen, Jessie W., & **LaPorte,** W. R. Your health and safety. 550p. 1942. Harcourt, New York, $1.96.

Journal of health and physical education, March 1943, p.192. 6 l.

"The goal of this book is better living for students now. Enough physiology is introduced at every point to explain and justify the rules of health. Since both health and safety are included, the problem of scheduling safety classes is solved. The authors believe that health and safety are related personal problems and therefore should be considered together."

Collins, A. Frederick. The greatest eye in the world. 266p. 1942. Appleton, New York, $3.75.

Natural history, March 1943, p.160. ⅔ col.

"With this title and with the jacket and frontispiece depicting the dome of the new 200-inch telescope, one would expect a goodly portion of the book to be devoted to the Palomar Observatory, but only the last chapter is . . . The scope of the present book is indicated by the first sentence of the author's preface: 'While many books have been written about telescopes and the celestial marvels that are revealed by them, there has not been one, in so far as I am aware, that deals with the inception and development of the great observatories, their equipment, past performances and present programs and personnel' . . . A large section of the book is devoted to stories of the origin, development, and work of our great observatories, and these provide interesting and dependable reference material." *Clyde Fisher.*

Cooper, Isabella M., comp. Bibliography on educational broadcasting. 576p. 1942. Univ. of Chicago Press, Chicago, $5.

Electronics, March 1943, p.324. ⅔ col.

"Made up from a large collection of material (books, pamphlets, periodicals) gathered during the nine years of the existence of the National Advisory Council on Radio in Education, plus some outside material, this volume is really a History of broadcasting from the earliest days. The aim of the compiler was to furnish a bibliography of practical utility giving access to reference and research material in the historical, technical and educational fields of broadcasting with particular application of this art to instruction . . . A most useful bibliography of the non-technical phases of broadcasting." *K. H.*

Crile, George, jr., & **Shively,** F. L., jr. Hospital care of the surgical patient; a surgeon's handbook. 184p. 1942. C. C. Thomas. Springfield, Ill., $2.50.

Ohio state medical journal, April 1943, p.392. 6 l.

"Prepared primarily for the standardization of routine technical procedure. It combines in one small volume the clinical, physiological and technical principles as used in surgical practice in the hospital . . . Will be very useful for the hospital library."

Crites, Sherman E. Flight principles. 65p. 1942. Airlines War Training Inst., Washington, D. C.

Aeronautical engineering review, March 1943, p.105. ⅓ col.

"The elementary principles of flight are set forth in a book written especially for aircraft flight and ground crews. Prepared for the use of the instructor and students in the classroom, this book is divided into sections each of which represents one hour of lecture. The method of presentation is such that students entirely unfamiliar with flight principles should be able to acquire a fundamental knowledge of the subject with a minimum expenditure of time. The material in the book was not prepared for home study. There are many diagrams that help to clarify explanations, and classroom problems are presented at the end of each lecture."

Darnall, Joseph R., & **Cooper,** V. I. What the citizen should know about wartime medicine. 237p. 1942. Norton, New York, $2.50.

American journal of nursing, April 1943, p.420. 11 l.

"Both timely and authoritative, since one of the authors is executive officer at Walter Reed Hospital. Although oversimplified even for the lay reader for whom it is intended, the book gives an interesting overview of the Army and Navy medical departments, including briefest possible mention of the Nurse Corps of each. Especially interesting chapters are the introductory ones on 'American Medicine Mobilizes for War,' 'Medicine Takes to the Air,' and 'Military Psychiatry'." *M. M. R.*

Davis, Dale S. Empirical equations and nomography. 200p. 1943. McGraw, New York, $2.50.

Mechanical engineering, April 1943, p.290. 1 col.

"Presents, in nice mathematical style, two subjects which in one sense are as far apart as possible — given the data, required the curve and formula; and given the formula, required the diagram — and yet in another sense are closely related in the experience of engineers." *H. L. Seward.*

Paper trade journal, March 18, 1943, p.34. 11 l.

"Covers the correlation of engineering test data, combining new techniques with standard methods and presents the essentials of the construction of alignment charts which provide rapid and convenient means for making calculations. Theory, working directions, illustrations and practical problems from recent literature facilitate efficient engineering application."

Davis, Harry M., & **Fassett,** F. G., jr. What you should know about the signal corps. 1943. Norton, New York, $2.50.

Electronic industries, April 1943, p.128. ¾ col.

"The importance of the Army Signal Corps and the progress of military communications 'from torch to electronic tube,' are graphically described . . . The latest methods of communications, employed by the armed forces, which have been developed by the Signal Corps through the cooperation of the communications and radio industries, are related in non-technical but accurate language by the two authors . . . One of the most interesting chapters in the book is the final one which touches on the communications and electronic developments which will flow out of the discoveries and inventions produced in the war procurement effort."

Des Jardins, Russell T. Vitalized chemistry in graphicolor; edited by George C. Job and Theodore C. Sargent. 380p. 1942. College Entrance Bk., New York, $1.25.

Journal of chemical education, April 1943, p.206. ½ col.

"Unique in its format rather than in its content . . . The order of topics is conventional in the first two-thirds of the book. The remaining chapters deal with various applications of chemistry directly. There are chapters on structural metals, 'airplane' metals and protective metals, on paints, on food, drugs and cosmetics, on textiles and plastics, and on chemical warfare." *Robert L. Ebel.*

Dingle, Herbert. Sub-atomic physics. 272p. 1942. Nelson, New York, 5s. (Nelson's aeroscience manuals.)

Journal of the Royal Aeronautical Society, Feb. 1943, p.84. ½ p.

"This book forms Volume II of a course of Physics for Aeronautical Students of which Volume I on Mechanical Physics has already been reviewed in the Journal. Like its predecessors in this excellent series, this is a first-class book. It covers in an introductory chapter the structure of the atom, and in the remainder of the book optics and electricity and magnetism. Professor Dingle not only writes well, but clothes the most difficult part of the book in common place analogy and language which go so far to make the student not only understand what the author is writing about, but also make him interested in what he is reading . . . Excellently printed and illustrated and can be thoroughly recommended to all students taking the subject of physics in their examinations, whether aeronautical or not."

Donaldson, Cyril, & **LeCain,** G. H. Tool design. 443p. Harper, New York, $3.75. (Rochester technical series.)

American machinist, March 4, 1943, p.139. ⅜ col.

"General methods of tool design, which enable the student to develop ideas into practical specifications for modern manufacturing methods, form the basis for this volume. The contents, which are aimed primarily at persons preparing to be tool engineers, include preliminary sections on the place of the tool engineer in the plant, on drafting room practice, manufacturing processes, properties of materials, and tolerances and allowances . . . The book is designed for students at a technical school level, but for a book at such a level, the contents of individual chapters are extensive . . . A variety of teaching materials is given at the end of each chapter, including questions on the text, mathematical problems, design and drawing problems. Illustrative problems are included in the text where necessary."

Product engineering, April 1943, p.252. ⅜ col.

"Content is selected primarily for persons who are preparing themselves to fill the position of tool designer, however, estimators, planning experts and production engineers should find the book to be a help in solving many technical problems associated with tooling . . . The book sets forth the general methods of tool design in a comprehensive manner and should enable any technical worker to develop ideas into practical specifications for the production of parts by modern manufacturing methods."

Tool engineer, April 1943, p.188. ¼ col.

"A textbook for the preparation of the tool designer, tool engineer, tool maker, and draftsman . . . Designed for use in factory training courses, technical schools, and engineering, science, and management war training courses . . . Provides a supply of assignments for student work: questions, numerical problems, sketches, and practical design jobs."

Dooley, William H. Textiles. Revised edition. 790p. c1943. Heath, Boston, $4.

Rayon textile monthly, March 1943, p.98. ⅜ col.

"Primarily designated for educational needs of high school students and used in classes of dressmaking, clothing, costume design and interior decoration, and for stylists, home economics teachers, retailers and consumers . . . Discusses all phases of textiles and gives general information only . . . We recommend it for all non-technical students, new comers and consumers."

Textile colorist, March 1943, p.132. 1 col.

"Not a scientific treatise of the subject and although the author indicates that it was compiled for use in teaching students, it contains most valuable information for those employed in every branch of textile production, including both chemical and mechanical operations. The extended experience of the author in the production of textiles and his many years' experience in textile schools has given him a vast amount of information not usually found in books upon this subject which he has compiled and formulated in a logical, informative and practical manner."

Duncan, Amon Ocyrus. Food processing; [edited by Paul W. Chapman]. 544p. 1942. T. E. Smith, Atlanta, Ga., $3.

Practical home economics, March 1943, p110. ½ col.

"The word *processing* is used in its broadcast sense in the title of this book which was written 'with the hope that it will prove useful in helping many Americans attain the 'gold standard' of nutrition.' It covers all forms of preparing and preserving foods for use and storage . . . Is suitable for use in high schools as well as in colleges and urban as well as rural institutions. The suggestions for study and supplementary reading following each chapter will be of particular value to teachers and home demonstration agents."

Duryee, William B. Farming for security. 250p. Whittlesey House, New York, $2.

Poultry tribune, April 1943, p.37. ¼ col.

"Written especially for the person who owns or intends to purchase a farm as a new venture in today's world, this book is absolutely abreast of the times with discussions of inflation, income taxes, rationing, and many other subjects in relation to farm ownership. The author is not only a farmer, but has spent a span of 30 years in agricultural teaching, farm demonstration work, and farm management advice, and for 12 years was Secretary of Agriculture in New Jersey."

Eaton, Joseph J., & **Free,** A. V. Machine shop science and mathematics. Ed.3, revised and enlarged. 187p. Manual Arts Press, Peoria, Ill., $2.

American machinist, April 1, 1943, p.136. 11 l.

"Designed for use by vocational students. The material covered is the elementary physics, chemistry and mathematics involved in machine shop work. It is presented in the simplest language with an abundance of examples and problems."

Steel, March 8, 1943, p.139. ⅜ col.

"Designed for beginning and veteran machine shop workers, explaining simply the physical, chemical and mathematical fundamentals needed and used in the shop for proper comprehension, setup and operation of the lathe, drill press, planer, milling and other machines. Starting from the beginning, assuming no previous knowledge of the subject, it treats weights and measures; simple machines such as wheels, screws and levers; strength of materials; fits, tapers, force, work, energy, heat and its effects and motion."

Etchison, James W. Hydraulic principles. 115p. 1942. Airlines War Training Inst., Washington, D. C.

Aeronautical engineering review, March 1943, p.105. ¼ col.

"Principles of hydraulics are set forth in this series of lectures prepared for flight and ground crews. These lectures are intended to be used in conjunction with a shop course in hydraulics. The book is divided into sections each of which represents approximately one hour of lecture work. Example problems and classroom problems are presented at the end of each lecture. The material was not prepared for home study, but for the use of students and instructors in the classroom. Diagrams aid in clarifying the principles presented."

Fink, Donald G. See **National Television System Committee.**

Flikke, Julia O. Nurses in action. 235p. 1943. Lippincott, Philadelphia, $2.50.

American journal of nursing, March 1943, p.323. 1 col.

"This timely book is the crowning achievement of a quarter of a century of useful service to the nation. Her purpose in writing it, Colonel Flikke says, was 'to offer to young women everywhere information about one of the most important; romantic, and soul-satisfying professions open to women.' The book will serve that purpose well. Recruitment committees will bless her for its facts; the pulses of potential nurses will be stirred and their patriotism and idealism will be challenged by the descriptions of the lives of Army nurses . . . A book for every nurse who, having pride in the traditions of her profession, looks hopefully toward a greater future." *M. M. R.*

Flood, W. E. Elementary electricity for radio students. 62p. 1942. Longmans, New York, 1s. (Service manuals series.)

Journal of the Royal Aeronautical Society, Feb. 1943, p.88. 10 l.

"Will be welcomed by A.T.C. cadets and prospective wireless operators. Most text-books on electricity, even those describing themselves as 'elementary,' assume that the reader knows at least the ABC of the subject, and this frequently

means that he is confronted with terms, quantities and circuit drawings which he finds puzzling. The present booklet assumes zero knowledge, and proceeds to impart the ABC in a pleasant and lucid way. Every symbol is identified, every term explained in detail, and every explanation is followed by a simple numerical example, worked out in full."

Ford, Louis R. Practical marine Diesel engineering. Ed.4. 642p. 1943. Simmons-Boardman, New York, $6.

Marine engineering and shipping review, March 1943, p.212. ⅝ col.

"Contains two new chapters, one on electrical machinery and the other on deck auxiliaries. While the discussion of electrical machinery is by no means intended as a complete treatise on electricity, it will give the Diesel engineer the basic information required to develop a working knowledge of the electrical machinery ordinarily found on a motor vessel. Similarly the discussion of deck machinery is designed to acquaint the Diesel engineer with the principal items of equipment outside the engine room that are serviced by the engine-room crew . . . Deals exclusively with American Diesels and to the makes of engines most widely used in the types of motor vessels now being built in this country."

Ford Trade School. Six-figure trigonometrical tables and formulae. Ed.2. 56p. 1942. Ford Motor Co., Ltd., Dearborn, Mich., 1s. 6d. net.

Beama journal, Feb. 1943, p.52. ⅝ col.

"The bulk . . . comprises tables giving sines, cosines, tangents and their reciprocals for all angles from 0 deg. to 90 deg. in intervals throughout of 1 minute. There follows, solutions of triangles with various trigonometrical rules, some simple theorems connected with circles, functions of compound angles, multiple angles, the sums, differences, and products of trigonometric functions, inverse circular functions, trigonometric series, and functions . . . The publication is nicely printed and prepared and it represents a praiseworthy effort to facilitate the technical education of those junior engineering employees whose paths are not cast along the most favourable lines."

Gabrielson, Ira N. Wildlife refuge. Macmillan, New York, $4.

Natural history, March 1943, p.155. ⅔ col.

"Dr. Gabrielson has made a substantial contribution to the literature of wildlife conservation in this volume devoted to the subject of wildlife refuges. He is well acquainted with the background for the present system of refuges and has taken an active part in the creation of many of them. This work is essentially a textbook. The topic is a large one, and the book takes on the character of a catalogue, at times . . . A person must read this book to get the proper realization of all that has been and should be done. This reviewer has not seen the topic of refuges handled in such authoritative and comprehensive fashion by any other author." *H. E. Anthony.*

General Electric Consumers Institute. Wartime nutrition and homemaking course. The Institute, Bridgeport, Conn., gratis.

Electric light and power, April 1943, p.118. ½ col. including an illustration.

"Designed for use by industrial dietitians, home economists, school teachers, home demonstration agents, etc. It contains authoritative information and plans on how to present nutrition instruction which will get the story across in the factory and the home, how to build advance interest in nutrition schools, and how to maintain audience interest for the length of the course. The course offered can be given over a period of either three or four weeks and has already been successfully staged in several utilities and other organizations. Single copies are free to instructors who plan to use the course. Additional quantities are available at cost."

Gilman, Henry, and others, ed. Organic chemistry; an advanced treatise. Ed.2. 2v. v.1, 1-1077p.; v.2, 1079-1983p. 1943. Wiley, New York, $7.50 each.

Science, March 26, 1943, p.288. ⅜ col.

"Few recent treatises on chemistry by American authors have received, both here and in other countries, such a universal and enthusiastic welcome and commendation as the first edition of this work. From the date of its publication in 1938, it has been regarded as an outstanding and authoritative contribution to the literature of its subject. This new edition, therefore, which brings many of the chapters in the previous one up to date, and introduces some new ones, is assured of a most cordial reception by all organic chemists . . . In addition to members of the editorial board, twenty-five other distinguished chemists make up the list of contributors. The books are indispensable to the organic chemist who wishes to keep in the fore-front of his profession." *Marston Taylor Bogert.*

Goldstein, Kurt. Aftereffects of brain injuries in war; their evaluation and treatment; the application of psychologic methods in the clinic. 244p. 1942. Grune, New York, $4.

American journal of public health, March 1943, p.291. 1½ col.

"A clear presentation of the problem of the care and rehabilitation of the cerebrally injured, which should be of interest to psychologists, neurologists, neurosurgeons, psychiatrists, and clinicians in general. The bibliography is a valuable although incomplete list of the publications on this subject with particular emphasis on the German literature." *A. Earl Walker.*

Goodman, William. Air conditioning analysis with psychrometric charts and tables. 455p. 1943. Macmillan, New York, $6.

Heating and ventilating, March 1943, p.54. 1¼ col.

"The book is unique in that, as the title implies, it deals in the science of changing the condition of air and does not treat air conditioning equipment or design . . . Throughout, the author has used the simple and lucid style for which he is well known. The derivations of all formulæ are grouped in an appendix at the end of each individual chapter. While this may be confusing to some readers, those who are interested in results alone and not in the mathematical development will find this feature most convenient . . . On the whole, the text cannot be recommended for the beginning student, but for the practicing engineer as well as the advanced student this unique text with its tables and charts should prove a most valuable addition to his reference library." *M. C. Giannini.*

Heating, piping & air conditioning, March 1943, p.129. 1½ col.

"In his preface to this excellent book, the author states that his purpose is to present a comprehensive, unified treatment of the fundamental elements involved in changing the condition of air. He purposely omits the detailed treatment of the apparatus and equipment by which air is customarily handled, and confines his analysis to the basic science of air conditioning. Mr. Goodman has long been recognized as an outstanding authority in his field, and his book is, therefore, an exceptionally valuable contribution . . . [He] has rendered a great service to the engineering profession by assembling in convenient form the data from which any air conditioning problem can be solved, and by setting forth in clear and logical fashion the basic principles on which the science of air conditioning must rest." *J. I. Yellott.*

Power, March 1943, p.122. ⅜ col.
"This useful book deals entirely with the basic element of air conditioning — air — providing a comprehensive discussion of the fundamentals involved in the various air-condition changes which occur in practice. Mr. Goodman's well-known ability to explain theoretical matters in simple terms finds full play in this text. To make for easier reading, all mathematical derivations are placed in appendices where they may be studied in detail if the reader so desires . . . Any engineer desiring a firm grasp of the principles involved in changes of air condition or engaged in work where analysis of air-conditioning processes is a common problem, will find this book a valuable library addition."
Power plant engineering, April 1943, p.186. ¼ col.

Grammer, George. Course in radio fundamentals. 104p. 1942. The American Radio Relay League, West Hartford, Conn., 50c.
Electronic industries, April 1943, p.128. 12 l.
"Contains assignments, experiments and examination questions based on the Radio Amateur's Handbook. It is primarily intended to teach the individual home student and it takes into account the fact that just reading a book is not enough to acquire familiarity with a subject. The fundamentals of radio certainly will be well known to anyone who conscientiously follows the assigned text."
Radio, March 1943, p.23, 50. 1 col.
"Represents an idea unique in the radio educational field. It is not a textbook; instead it contains those elements of a course of classroom study which lie outside the textbook proper —study guide, examination questions and laboratory experiments. The course is equally valuable for use in connection with home study and as a classroom guide for the teaching profession. For home students it serves to replace the teacher, giving detailed experimental exercises and procedure as well as supplementary explanatory material where needed, in addition to providing an accurate gauge of progress through the probing examination questions accompanying each assignment. For instructors it is a completely synthesized course outline, of particular value to those who find themselves in the new field of radio technician training without the benefit of a planned course or time for thorough preparation."

Gregg, John Robert. Refresher course in Gregg shorthand. 64p. Gregg, New York, 28c.
Journal of business education, March 1943, p.33. 11 l.
"A condensed presentation of all the major principles of Gregg Shorthand, intended primarily as a review for those who may at some time have learned shorthand but who have not used it recently. In addition to the principles of the system, penmanship drills, brief-forms, special forms and phrases, and connected matter are included in this compact booklet of essential material."

Gregory, Edwin, & **Simons,** E. N. Mechanical working of steel. Pitman, London, 10s. 6d. net.
British steelmaker, March 1943, p.117. ⅜ col.
"The authors . . . not only describe the remarkable developments that have taken place in the technique of the hot and cold working of metals, but in a simple way have attempted to discuss the structures produced by the various types of operations and how these can be modified to produce the best results. As a first introduction to a subject of great and growing importance in modern industry this work will prove useful to engineering and metallurgical students to whom a knowledge of modern processes is important, as well as to those who are responsible for those processes."

Foundry trade journal, March 18, 1943, p.227. ⅜ col.
"Foundry executives desiring to obtain a working knowledge of processes which are often competitive to their own will find the reading of this book an easy and reliable method of acquiring it, for simple straightforward English has been used throughout its compilation." *V. C. F.*
Model engineer, March 4, 1943, p.198. ¼ col.
"This is a practical treatise which is both comprehensive and timely, and seems to us to be particularly useful at the present moment. There are eighteen chapters, each dealing concisely with a particular branch of the subject and supported by eminently appropriate illustrations in half-tone and line."

Hamilton, E. R. Air navigation. 176p. 1942. Nelson, New York, 5s. net.
Beama journal, Feb. 1943, p.52. ⅜ col.
"The author of this work writes with evident authority, he having had considerable practical experience in teaching the subject during the First World War and also the present one. In fact, it is astonishing how much tuition of real solid worth has been compressed into so small a compass . . . A wealth of practical exercises and examples is included throughout and at the end of the book, and the answers to these are finally given. The book is a worthy member of the publisher's series of Aeroscience Manuals and it provides a readable study for those taking an intelligent, if not occupational, interest in applied science."

Hart, Walter W. Basic mathematics; a survey course. 456p. Heath, Boston, $1.52.
School science and mathematics, March 1943, p.295. ½ p.
"This text is most certainly a survey course, in fact it is almost an elementary reference book. It has been planned to provide the training in mathematics needed in the present emergency. Because of the condensed explanations, in many parts a good teacher will be needed . . . From the point of view of one who has been teaching pilot trainees in the CAA War Training Service, one can only wish that more students had studied a text like this in high school . . . There seems to be an ample supply of problems. Numerical tables include squares, cubes, square roots, cube roots, four place logarithms, and four place natural values as well as logarithmic values of the trigonometric functions. No answers to problems are given in the text." *Cecil B. Read.*

Haslett, Caroline. Teach yourself household electricity. Ed.2. English Universities, Kent, 3s. net.
Ironmonger, March 6, 1943, p.44. ⅜ col.
"Although Miss Haslett has not written for the trade, being concerned mainly with telling householders some of the essential things they should know about electricity, ironmongers can confidently recommend her book to their assistants. In these days when shopkeepers are often glad to use the most inexperienced additions to their staff, such books as this are specially valuable. Everything is explained in the simplest terms, and a notable feature is the amount of space given to describing appliances such as the assistant would normally handle: toasters, fires, polishers, razors, lamps, kettles, irons and many others . . . Any ironmonger's assistant with a working knowledge of this book's contents need have no qualms about work in the electrical department."

Henderson, Yandell, & **Haggard,** H. W. Noxious gases and the principles of respiration influencing their action. Ed.2, revised. 294p. Reinhold, New York, $3.50. (American Chemical Society monograph series.)
Chemical and engineering news, April 10, 1943, p.528. ⅔ col.

"The present treatise has been revised and enlarged as required to give adequate treatment of the newer phases of the subject. Only gases which occur in industry are discussed. The objective is largely directed toward safety . . . Although war gases are not treated, references are given, and it is acknowledged that the development of safety devices in that field has made large contributions to protection against industrial gases." *S. C. Lind.*

Drug and cosmetic industry. March 1943, p.301. 1 col.

"Deals primarily with the special features of toxic action dependent upon volatility. Only those gases which occur in industry are dealt with here; their use in war is not discussed. As this book has been written for the practical use and information of chemists, engineers and others engaged in industry, a rather full description of the function of respiration has been included."

Rayon textile monthly, April 1943, p.92. ½ col.

Herrick, James B. Short history of cardiology. 258p. 1942. C. C. Thomas, Springfield, Ill.

Science, March 26, 1943, p.288. ¾ col.

"Well written and its interesting narrative style and logical sequences maintain the reader's constant attention and interest . . . Herrick, an outstanding clinician, has been remarkably able to present this brief but comprehensive work in a manner having particular appeal and interest to the internist . . . A book which merits the attention not only of the cardiologist, but all physicians and medical students." *F. A. Willius.*

Heyel, Carl, and others, ed. Foreman's handbook. 410p. McGraw, New York, $3.

American machinist, March 18, 1943, p.145. ¾ col.

"Though it emphasizes the kind of practical information a foreman needs in his work, this handbook was designed to be more than the usual book on foremanship. The eighteen chapters that make up the text are written by experts in the particular subjects drawn from industry, the universities, the trade papers and other educational fields . . . The book is comprehensive in its coverage of the general subject. It has chapters on all phases of the work, from direct day-to-day responsibilities of the foreman in handling people and supervising production to the background of economic and management fundamentals."

Electrical contracting, March 1943, p.116. ⅓ col.

"At a time when many men are being upgraded to supervisory positions, job crews are changing and many new hands must be molded into new routines, this reference manual for foremen fills an acute need . . . Provides an up-to-the-minute reference for the foreman who wants to make the most of his job . . . The logical sequence of subjects makes the work as readable as a novel."

Factory management and maintenance, March 1943, p.233. 8 l.

"Does not confine itself to immediate things [the] foreman must do, but also discusses background information he must acquire and the attitude he must develop to prepare himself for larger responsibilities. Written in understandable language, with data carefully chosen to be of service after the war as well as under present conditions."

Heywood, Johnson. Abrasive grains and their uses. 72p. Penton Pub. Co., Cleveland, $1 unbound.

Foundry, March 1943, p.120. ⅔ col.

"This interesting and informative booklet, prepared under the auspices of the Abrasive Grain Association, describes in condensed form the best methods of using abrasive grains for various purposes. Since the field of use for abrasive grain is extensive, it would be difficult to describe in detail all the applications. Therefore, a few typical examples of the effective use of abrasive grain in various jobs were selected and described with sufficient detail to be helpful in guiding the reader to a solution of his own problems."

Higgs, F. H. Practical engineering problems and their solution. 48p. 1942. Longmans, New York, 40c.

American machinist, March 18, 1943, p.145. ⅛ col.

"Intended to assist the practical engineer and mechanic to solve many engineering problems. It contains the most essential items associated with shop mathematics. The practical examples, together with illustrations, should overcome difficulties in applying theoretical knowledge. Tool room operators will find the data on developments valuable, since many of the problems are apropos of present-day production methods. The problems presented by the author include those in which a knowledge of fractions, decimals, square root, plain [sic] geometry and solid geometry are required. In addition there is information on mechanical drawing. Tolerances for five different types of fits are given in text and tabular form."

Hobbs, Glenn M., and others. Fundamentals of machines for those preparing for war service. 294p. 1943. American Technical Soc., Chicago, $2 (Workbook, 50c.). (Victory preinduction training series.)

American machinist, April 1, 1943, p.134. ½ col.

"Devoted about equally to practical physics and internal combustion engines, and includes a chapter on block and tackle. It is designed to prepare men for ratings as tank engine mechanics, drivers, or commanders; driver of scout car, reconnaissance car, ambulance, wrecker, or motor-cycle; portable power operator or repair man; power turret maintenance man; bridge foreman; truck master; demolition specialist; mine planter; searchlight operator; artillery mechanic; aerial engineer; or non-commissioned officer in motor transportation . . . Abundantly illustrated and clearly presented."

Rubber age, March 1943, p 532. ⅝ col. including other reviews.

Hunter, Dard. Papermaking; the history and technique of an ancient craft. 398p. 1943. Knopf, New York, $4.50.

Editor & publisher, March 13, 1943, p.40. 11 l.

"The results of 35 years of study and world-wide researches in the art of papermaking since its invention in China in 105 A.D have gone into [this book] . . . Puts into easily accessible and permanent form a great deal of information previously run across in scattered fashion. The book also brings out the world-wide search for fibers during which many hundreds of cellulose-containing substances were tried out."

Paper trade journal, March 4, 1943, p.25. ⅝ col.

"A new publication although it contains a selection of material from other books by the author. It has been written to give bibliophiles and amateur booklovers an insight into the methods used by paper makers throughout the world, from the earliest times to date. Although primarily an outline of papermaking, the book provides valuable information for papermakers, workers in watermarking, etchers, engravers, printers, bookbinders, paper salesmen and paper consumers."

Technology review, April 1943, p.338, 340, 342. 1¼ col.

Hyland, P. H., & **Kommers,** J. B. Machine design. Ed.3. 562p. McGraw, New York, $4.50.

American machinist, March 18, 1943, p.144. 12 l.

"A number of changes have been made to bring

about clear presentation. However, the same subject matter is presented in the same order. Where new material has been added, old material has been omitted to keep the size of the book within the limits of the second edition. All problems in this edition are new and intentionally short. The answers to many problems are given."

Product engineering, April 1943, p.252. ⅛ col.

Illingworth, C. F. W., ed. Textbook of surgical treatment, including operative surgery. 528p. Livingstone, Edinburgh, 28s. net.

Pharmaceutical journal, Jan. 2, 1943, p.5. ¼ col.

"The eighteen contributors to this new work are men well known in Scotland for their specialised study of various aspects of surgical treatment. There are 37 chapters to the book; each deals with the surgery of a particular part of the body, or, in the case of chapters dealing with wound infections, burns, amputations, fractures, and plastic surgery, with conditions in which some form of surgical attention may be necessary. The editor of the book has himself contributed the chapters on wound infections and on burns, and in these are summarised briefly some of the non-surgical measures which are often taken, for example the use of sulphanilamide to prevent infection of wounds and of cold-liver oil to promote the healing of burned tissue. There are 144 illustrations."

Institute of Welding—Welding research council—Subcommittee R 21. Technique for the gas welding of rolled aluminium and of aluminium alloy castings. 34p. 1942. The Institute, London, 1s. 6d. net.

Mechanical world, Feb. 5, 1943, p.152. ½ col.

"It lays down certain details of gas welding procedure and summarises the general principles which form the basis of a successful technique for dealing with aluminium and its alloys. It does not give a rigid specification of detailed procedure, that would probably not be feasible owing to the differences imposed by specific applications; nor does it attempt precise instructions as to the type of blow-pipe or the exact size of nozzle, as these are invariably affected by the welder's degree of manual dexterity and the area and thickness of the work being welded . . . A series of good photographic illustrations greatly adds to the valuable instruction which this memorandum provides."

Jacobs, Robert H., & **Cady**, E. L. Marine engine and fire room guide. 730p. 1943. Cornell Maritime Press, New York, $3.50.

Marine engineering and shipping review, March 1943, p.214. ⅛ col.

"The fact that this book contains 87 separate chapters plus a very complete index gives some idea of its scope. It is a practical manual for the guidance of the 'black gang,' with theory and higher mathematics eliminated. It is written in the language of the 'black gang' and therefore the information presented can be readily understood . . . The book . . . contains no information regarding electricity or electrical equipment on board ship. Except for this omission, the book will be found a useful guide for the unlicensed personnel of the engine department."

Job, George C. See **Des Jardins**, Russell T.

Kafka, M. Martyn. Flying health. 248p. 1942. Military Service, Harrisburg, Pa., $2.

Aeronautical engineering review, Feb. 1943, p.87. ⅝ col.

"Written primarily for the guidance of pilots and will render a valuable service. The author, from his experience as a flight surgeon, gives advice that will convince any pilot of the necessity of having competent medical supervision. The value of rest and exercise is stressed. The effects of flying on the pilot's heart, eyes, ears, nose, and throat are explained. The chapter on dissipations is written from the point of view of a friend and not a prude . . .Tropical aviation, Arctic aviation, first aid after accidents, altitude effects, and a list of diseases every pilot should know are all discussed . . . Before any young man proceeds far in his flying career he would do well to read Dr. Kafka's book."

Aviation, March 1943, p.305. ⅛ col.

"It takes two machines to keep a plane in flight — one in the power nacelle, the other in the pilot seat. To give the human machine 'the advice and knowledge' required to keep in flying condition, Dr. Kafka describes at some length various major vital organs of the body and the defects to which they are heirs under varying flying conditions and climates. He gives some very stern advice and strict admonitions re temperance. Outstanding, however, is the excellent grasp he offers of the more primary, all-controlling physical forces which can ground a man permanently."

Ohio state medical journal, April 1943, p.394. 10 l.

Western flying, Feb. 1943, p.148. ⅛ col.

"Keeping fit is the pilot's first rule for self-preservation and the avoidance of accidents caused by human factos [sic]. But keeping in the pink of condition involves far more than casual or periodic checkups or even regular supervision; it requires that the flier, himself, be completely familiar with all of the many and complicated essentials for maintaining flying health. Writing clearly and easily in the pilot's own language, the author, a former U. S. Army Air Corps flight surgeon and a specialist in his field, has presented a wealth of information that is invaluable to all fliers."

Kehl, George L. Principles of metallographic laboratory practice. Ed.2, revised. 453p. McGraw, New York, $4.

Chemical & metallurgical engineering, March 1943, p.195. ⅛ col.

"Data on the latest and supplementary laboratory manipulations and processes have been added, and illustrations showing the contrast between results of proper and improper procedures are more numerous than in the previous edition. The appendix, containing extensive data on etching reagents, hardness numbers, etc., has been rearranged and expanded."

Engineering and mining journal, April 1943, p.92. ⅛ col.

Heat treating and forging, March 1943, p.147. ½ col.

"Brought up to date to meet present day needs. The original purpose in writing the first edition — to provide a fundamental treatment of metallographic laboratory principles — has been adhered to in the present volume and subjects better treated in separate volumes due to their importance and expansiveness, have accordingly been omitted. No attempt has been made to outline or to suggest actual laboratory experiments, as it is believed this is a function of the individual teacher."

Welding journal, March 1943, p.192. ⅓ col.

"The author attempts to fill what is believed to be a very definite need for a text-book of fundamental principles involved in metallographic laboratory practice — a book that will bridge the gap between theoretical physical metallurgy and its practical application in the laboratory. As the title implies, this book is primarily a treatment of laboratory principles."

Kharasch, Norman, & **MacKenzie**, H. S. Essentials of college chemistry. 513p. 1942. Van Nostrand, New York, $3.50.

Science, March 19, 1943, p.264. 1½ col.

"Under this title the authors, both staff members of the Illinois Institute of Technology, have produced a very readable, well-indexed introduction to general chemistry. Their style is clear,

direct and unhurried. The illustrations . . . are pertinent and well-balanced. The value of the text is enhanced by the use of large, clear type, non-glossy paper and durable binding. Faced with the necessity of choosing from the vast accumulation of introductory material, the authors have placed extra emphasis upon the structure of matter, and by their omissions and order of arrangement constantly remind us that success lies around many corners." *R. A. Baker.*

King, L. C. South African scenery; a textbook of geomorphology. 340p. 1942. Oliver, London, 25s.

Geological magazine, Jan.-Feb. 1943, p.36. 2 p.

"The general scope of this book is more geological than is implied by its title. In fact the first seventeen chapters form an excellent short and condensed textbook of physical geology, based as far as possible on South African examples, while for glaciation and vulcanology recourse is had to Central Africa and New Zealand. Hence the ground is very well covered. The author's style is simple, clear, and easy, and though some technical terms not familiar to European geologists are here and there introduced, each is carefully defined, so that the meaning is obvious. Illustrations are very numerous and well chosen, the majority from the author's own photographs and some are very striking." *R. H. R.*

Kingsland, J. C., & **Seager,** D. W. Navigation. 1943. Oxford Univ. Press, London, 2s. 6d. (Oxford air training manuals series.)

Journal of the Royal Aeronautical Society, March 1943, p.106. 12 l.

"Here is yet another manual for the A.T.C. cadet, closely following the pre-war 2nd Class Navigator's syllabus: Form of the Earth, Maps and Charts; Magnetism and Compasses; 'Meteorology' (in this case used as a synonym for a paragraph or two on atmospheric pressure and its effects on instrument readings), and Dead Reckoning Navigation. In less than 100 pages, the authors contrive to impart a good deal of useful information . . . There are a number of exercises, to which answers are given at the end of the book."

Knutson, K. W. Pipe and tube bending. 29p. Cornell Maritime Press, New York, $1.

Heating, piping & air conditioning, March 1943, p.134. 8 l.

"Presents a set of original tables for the rapid calculation of any bend with a minimum of error. The author . . . presents center line and 'gain' values which he has tabulated in order to permit finishing bends without taking the work from the machine or using a full scale layout."

Leffingwell, William Henry, & **Robinson,** E. M. Textbook of office management. Revised edition. McGraw, New York, $3.

American business, March 1943, p.36. ⅝ col.

"Throughout every chapter of the book there is a 'know how' approach to every office problem . . . Points out that almost no office can be so arranged that all work will flow in a straight line. Without minimizing the straight uninterrupted flow of work as a goal to be achieved whenever possible, it shows that the chief problem is to build and arrange the office around the dominant flow of work, whatever that may be—in many offices the handling of orders, but in other offices, such as insurance companies, the policy itself. The same practical approach to all other office problems is dominant in the book and the reader is left with a feeling that the authors know whereof they speak. A copy of this book in any office will be quickly worn dog-earned from constant reference and study."

Factory management and maintenance, April 1943, p.156. 10 l.

"Aimed at training men in analyzing of office requirements, planning and laying out the work, selecting competent workers, directing them, and controlling office operations. Nearly 700 questions and 40 problems are presented to provide the student with the opportunity to test himself and his knowledge."

Lefschetz, Solomon. Topics in topology. 137p. 1942. Princeton Univ. Press, Princeton, N. J., $2. (Annals of mathematics studies, no.10.)

Mathematical reviews, March 1943, p.86. ⅝ col.

"This book may be considered as a continuation of the author's Algebraic Topology . . . Written in the same style, it undertakes a further study of geometric and singular complexes, mapping theorems, retraction, and local connectedness . . . Should prove very useful to any worker in this field." *H. Whitney.*

Levi, F. W. Algebra. v.1. 305p. 1942. Univ. of Calcutta, Calcutta.

Mathematical reviews, March 1943, p.66. ½ col.

"Covers part of a post-graduate pure mathematics course. It had first been published in form of lecture notes . . . An introduction to abstract algebra is given, and the numerical problems are treated . . . Well written, and many examples should further increase its value as a text book." *R. Brauer.*

Leyson, Burr W. Army engineers in review. 202p. Dutton, New York, $2.50.

Engineering news-record, March 11, 1943, p.128. ½ col.

"Written for young men seeking information on the activities of the Corps of Engineers, U.S. Army. The writing answers its purpose in a satisfactory manner and can be recommended as good reading for the youth wanting to learn of the Army engineers in both peacetime and war. The book makes available an interesting history of the U.S. Engineers, and describes the river and harbor work of the Corps, its railroad and general construction operations, demolition, map making and camouflage . . . Older engineers, especially those familiar with the duties of the Corps of Engineers in peacetime, will find the book worthwhile reading despite the fact that the author writes in a style designed to meet the needs of younger readers."

Lieber, Richard. America's natural wealth. 245p. Harper, New York, $2.50.

American forests, March 1943, p.134. ⅝ col.

"The story of the use and abuse of our natural resources, told by a man who has given the best years of his life to expounding and promoting conservation. Since 1912 Richard Lieber has been an active and prominent figure in the field of conservation, and when it is remembered that conservation has been defined as the organized effort to make men more aware of their indispensable partnership with nature, it is not surprising that he has written this book, telling of the extent of the use and waste of America's natural wealth—covering her minerals, forests, waters, agriculture and parks. Readable, convincing,—the author paints, very simply, an over-all picture of our basic natural resources, their depletion, and the opportunities offered today for action, both public and private, to forestall exhaustion of vital minerals. It is a book to read, and own."

McCoy, Robert A., & **Lott,** D. N. Rules of the road. 121p. 1942. F. J. Drake, Chicago, $2.

Scientific American, March 1943, p.139. 8 l.

"Navy and reserve officers, midshipmen and enlisted men, merchant marine officers and seamen, sea scouts and private yachtsmen will find this thorough explanation of every combination of lights or signals required under both International and Inland Rules of the Road both timely and valuable." *A. D. R., IV.*

McDougal, Wynne L., and others. Fundamentals of electricity for those preparing for war service. 388p. 1943. American Technical Soc., Chicago, $2. (Victory preinduction training series.)

American machinist, March 18, 1943, p.144. ⅓ col.

"Another volume in the publisher's Preinduction Training Series designed to meet the requirements of the War Department for ratings as automobile, airplane, and engine mechanic; telephone and telegraph linemen and operators; ammunition handlers; construction foremen; radio operators; mechanics and repairmen; fire control instrument operators; motorcylists; anti-tank gunners; and electricians. It is presented in a 'how to do it' method. The text is accompanied by a work book containing a series of elementary projects to be worked out by the student. The text is clearly illustrated. Much of it is taken from 'Applied Electricity' by the same publisher."

Modern machine shop, April 1943, p.356, 358. 1¼ col.

Rubber age, March 1943, p.532. ⅖ col. including other reviews.

McIntosh, Colin H. Radio navigation for pilots. 171p. McGraw, New York, $2.

American aviation, April 15, 1943, p.30. ½ col.

"Highly recommended for airline and private pilot alike. By eliminating academic theory and highly technical terminology the author has achieved unusual clarity and brevity. As the name implies the book deals solely with radio techniques and makes no attempt to treat instrument flight methods." *F. A. Spencer.*

Aviation, March 1943, p.305. ⅖ col.

"Radio navigation, Mr. McIntosh feels, requires 'the ability to visualize the problem at hand into a mental diagram . . .' Granted, books will not give one's position over Skunk Hollow, but this one comes as close as any could in telling the commercial pilot, for whom it is chiefly intended, how to interpret the message-stuttering in his earphones. Mr. McIntosh has set himself the task of selecting and presenting 'only the basic information and essential techniques that a pilot needs' to reach a desired desination [sic]. He covers this assignment in succinct chapters on radio navigation and range systems, then proceeds to explain the principles and employment of direction finding loops, radio compasses, and obtaining fixes."

Western flying, March 1943, p.138. ⅓ col.

"The purpose of this book is to provide the average pilot with a brief and non-technical presentation of radio-navigation techniques. An effort has been made to maintain the discussion of the subject matter on a practical plane. Academic theory and technical data of interest only to the technician have been omitted. From the great mass of material on the subject of radio navigation, only the basic information and essential techniques that pilots need have been given."

MacMillan, C. M. Foremanship and safety. 101p. Wiley, New York, $1.

Automotive and aviation industries, March 15, 1943, p.230. 12 l.

"Contains a number of well-written essays on hazards in industrial establishments and means to avoid them. It is addressed to foremen, through whom any program for industrial safety must be put into effect . . . Contains 27 chapters, each devoted to a particular aspect of the general industrial safety problem, and the discussion of the particular problem dealt with in the chapter is followed by a 'Prepared Talk,' suitable for delivery at a safety meeting."

Factory management and maintenance, March 1943, p.233. 8 l.

"Intended as an easily read book which may be referred to readily and will not only help in foreman training but will also aid in solving the foreman's daily safety problems. Each chapter is divided into two parts—general information on the subject being treated, and a prepared talk for the foreman to give his men."

Power plant engineering, April 1943, p.186. ¼ col.

Mainwaring, James. Introduction to the study of map projection. 1943. Macmillan, New York, 5s.

Journal of the Royal Aeronautical Society, Feb. 1943, p.88. ⅓ p.

"It is several years since there has been published a good elementary text-book on map projection. The present work is therefore particularly welcome, at a time when so many young men are studying navigation in the A.T.C. or pre-entry classes for the R.A.F. . . Divided into three parts, entitled respectively: The Problem of Map Projection, The Process of Map Projection, and The Projections Applied. Of these, the second is, of course, the fullest and most important . . . Includes a series of test questions which the student may work out for himself from the text, or with the help of a teacher (answers are given only in a few numerical cases)."

Marcus, Abraham, & **Marcus,** William. Elements of radio. 699p. 1943. Prentice-Hall, New York, $4 (Schools, $3.20).

Aviation equipment, March 1943, p.122. 12 l.

"A full treatment of all the elementary and advanced principles of the science of radio is contained . . . It is treated in chapter form. It is very profusely illustrated with charts, graphs, etc. At the end of each chapter there is a glossary of terms and a series of questions based on the chapter, thus this is a good text book for home training, or training in class rooms."

Radio-craft, March 1943, p.383. ½ col.

"Designed to instruct those taking pre-service training in radio, and does it in an unusual way. Instead of giving basic electrical theory first, then radio principles, it presents both at different levels . . . The type is very easy to read and the diagrams and pictures illustrating particular phenomena are exceptionally large and clear, and accurately marked, so that comprehension of the idea is atttained at first sight . . . An excellent text for foundation study, whether in school or learning at home."

Scientific American, April 1943, p.187. ⅓ col.

"No mathematics are used in this 'home study course' on the fundamentals of radio; the authors have undertaken to guide the reader through these fundamentals without recourse to this scientific shorthand, with the exception of a few very simple equations which are completely explained. The text was prepared to the exact prescription of Government officials and hence serves adequately as a basis for appropriate training of individuals prior to their entrance into military service. Despite the simplification of the text, it is entirely thoroughgoing, giving a broad and authoritative picture of the fundamentals of radio as they have been developed to date."

Mayer, Fritz. Chemistry of natural coloring matters; translated from "Chemie der Organischen Farbstoffe," ed.3, v.2, by A. H. Cook. 354p. c1943. Reinhold, New York, $10. (American Chemical Society monograph series.)

Chemical industries, March 1943, p.377. ½ col.

"Surveys the chemical relations known to exist among natural compounds which possess visible color, incorporating research findings up to the summer of 1941 . . . Of special interest to the research chemist are the hundreds of specific references to more detailed material which point the way for future investigations. As Dr. Mayer says in his introduction, 'It is

regrettable that even today we remain almost completely ignorant of the methods by which these pigments are elaborated by nature'."

Drug and cosmetic industry, March 1943, p.301. ¾ col.

Rayon textile monthly, March 1943, p.98. ½ col.

"Represents an attempt to survey in the English language the chemical relations, known to exist among natural compounds, which possess visible color . . . The book covers the constitution, properties and biological relations of the important natural pigments."

Molloy, E. Automatics in engineering production. 112p. Chemical Pub., Brooklyn, $2.50.

Modern machine shop, April 1943, p.360, 362. 1 col.

"Intended to provide tool setters, machine tool operators and production engineers with a convenient source of reference on the entire subject of automatics without the introduction of excessive detail which would confuse the main points at issue."

Molloy, E., and others. Press tools. 108p. Chemical Pub., Brooklyn, $2.50.

American machinist, April 1, 1943, p.133. ½ col.

Modern machine shop, April 1943, p.358, 360. ½ col.

"Especially designed for use by toolmakers, die-sinkers, toolsetters, press operators, charge hands, foremen, and works managers concerned with the production of pressings and stampings, this book contains up-to-date information regarding the manufacture and use of molds, dies, and tools for engineering production."

Motor. Truck repair manual. 905p. Motor, Book Dept., 572 Madison Ave., New York, $8.

Contractor and engineers monthly, April 1943, p.9. ¼ col.

Military engineer, April 1943, p.212. ⅓ col.

"This new Repair Manual, as a ready reference on all makes and models of vehicles, including all army vehicles with the exception of the ¼-ton and two front-axle models of recent designs, will simplify and speed up truck repair . . . Drawn up in a simplified manner so that an inexperienced mechanic can understand it. It has 1,400 pictures and diagrams, and is a reliable and up-to-date source of truck repair information. Methods of disassembling truck parts are clearly and simply explained."

National petroleum news, March 31, 1943, p.41. 10 l.

"A complete truck repair manual . . . Contains information on 57 different makes of trucks—both gasoline and Diesel—manufactured from 1936 to 1942. Data covers the repair of engines, clutches, fuel systems, generators, lubricating systems, brakes, transmissions, electrical systems, governors and miscellaneous items such as wheel alignment and windshield wipers."

Mulligan, John A. Handbook of brick masonry construction. 526p. 1942. McGraw, New York, $5.

Engineering news-record, April 8, 1943, p.112. ⅝ col.

"Few books on brick construction have appeared in recent years, hence information on that subject is difficult to find. This new handbook undertakes to bring into one volume all the information concerning bricks and brick construction needed by engineers who must specify or inspect brick construction and by contractors who must estimate on brickwork and direct construction operations on which brick is used. All types of brick and brickwork are described . . . No information on brick pavements as used on highway and city streets is given, nor is there anything on reinforced brickwork. Considerable space is devoted to mortars, cement and concrete."

Myers, Victor C. Laboratory directions in biochemistry. 288p. 1942. Mosby, St. Louis, $3.50.

Science counselor, March 1943, p.36. ¼ col.

"This really excellent, lithoprinted manual differs from others of its kind in that great emphasis is placed on clinical biochemistry. This is to be expected since it is designed for medical and dental students. It may well be used by students of pharmacy, home economics and other groups. Experiments are grouped under three heads: biochemistry; clinical biochemistry; and dental biochemistry. There are a number of helpful illustrations and a valuable Appendix. The variety of experiments offered permits the instructor to select those which fit the needs of the particular group he is teaching. More are provided than will usually be performed in a one-semester course." *C. H. B.*

National Broach & Machine Company. Modern methods of gear manufacture. Ed.2. revised. The Company, Detroit.

Automotive and aviation industries, March 15, 1943, p.230. ⅓ col.

"Includes discussion of the advances in design, production practice, and techniques that have taken place in the interim . . . The text is recommended for the book-shelf of engineers and designers, gear specialists, and production men. Between its covers is a wealth of information, particularly as to gear finishing by shaving, that should make for profitable reading in every automotive plant engaged in war production."

National Fire Protection Association. How to train fire fighters. 176p. 1943. The Association, Boston, Mass., $1.50.

National petroleum news, March 31, 1943, p.41. ⅓ col.

"How to protect a plant against fire, what to do when one starts, and how to revive victims are among the wide variety of subjects discussed in the training manual for industrial fire brigades . . . [Contains] vital information on every phase of training—how to train fire brigades, how and with what to make forcible entries, fire extinguisher practices, rope work, types of ladders and hose and how to handle them; how to salvage and overhaul; fire stream requirements, ventilation, including how to size up a fire; inspection routines for fire protection and fire brigade equipment; causes and hazards of fires and how to fight them; and rescue practice. There is also a chapter on flammable liquid and gas fires and descriptions of extinguishing systems, including foam, carbon dioxide and water spray."

National Fire Protection Association. National fire codes for the prevention of dust explosions. 160p. 1943. The Association, Boston, Mass., $1.

Heating, piping & air conditioning, March 1943, p.132. ⅓ col.

"Includes the 15 American standard codes, a statement of the fundamental principles of dust explosion prevention in industrial plants, and a record of some 780 dust explosions which have occurred in the United States . . . All codes are purely advisory as far as the NFPA is concerned. They have great influence, however, because after their adoption by the association they are largely used as the basis of state and municipal legislation and fire insurance requirements."

Rubber age, March 1943, p.532. 10 l.

Spice mill, March 1943, p.31. ¼ col.

"Among the specific industries for which codes are included are: Woodworking Plants; Wood Flour Manufacturing Establishments; Flour and Feed Mills; Spice Grinding Plants; Starch Factories; Pulverizing Systems for Sugar and Cocoa; Terminal Grain Elevators; Country Grain Elevators; and Suggested Good Practice for the

Application of Suction and Venting in Grain Elevators and Storage Units. Also included is a standard method of using carbon dioxide or other inert gas for the prevention of explosions and fires."

National Television System Committee. Television standards and practice; edited by Donald G. Fink. 405p. 1943. McGraw, New York, $5.

Electronic industries, March 1943, p.146, 148. ¾ col.

"An abridged report of the most important information presented during the deliberations of the National Television System Committee, held during 1940 and 1941 . . . This book is a 'must have' item for those in television development as it gives the basic reasons for the standards finally agreed upon together with the advantages and disadvantages of alternate arrangements as they appeared to the committee at the time of the deliberations. Complete details of current standards are listed."

QST, March 1943, p.54. ⅓ col.

Radio, March 1943, p.23. ½ col.

"The material contained . . . was compiled from The Proceedings of the National Television System Committee, on which are based the standards adopted in 1941 by the FCC for commercial television broadcasting in the United States . . . The ten chapters cover the following subjects: Television Standardization in America, National Television System Standards, Television Systems, Subjective Aspects of Television, The Television Channel, The Television Transmitter, Transmitter-Receiver Relationship, Scanning Specifications, Synchronization of the Picture, Horizontal vs. Vertical Polarization . . . Since there appears to be the necessity for a revision of television standards upon the termination of the war, this book will serve admirably as the groundwork for future discussions on the subject. Its immediate value to the television engineer is evident." *M. L. M.*

Parker, Douglas B. Synopsis of traumatic injuries of the face and jaws. Mosby, St. Louis, $4.50.

Ohio state medical journal, April 1943, p.396. 6 l.

"Presents to the medical and dental profession a concise text that deals with the first aid treatment of face and jaw injuries at the site of injury. In addition to its importance in first aid work it is of major importance in the military field."

Perry, Edgar C., & **Schafebook,** H. V. Fundamental jobs in electricity. 447p. 1943. McGraw, New York. $2.20.

Science counselor, March 1943, p.23. ⅓ col.

"Designed for use in shop courses, deals with electrical theory as well as with practical applications. It provides a two-year course that should give students a good understanding of the fundamentals of electricity and the necessary skill to perform a considerable number of practical jobs. It is written and illustrated so clearly that it may almost be used for self-teaching . . . Consists of nine Units made up of 121 jobs ranging from the study of the primary cell, through signal wiring, communication, safety, light and power wiring, and generators, motors and transformers. It includes electrical refrigeration, automobile and airplane wiring, and the electric eye . . . A good book." *A. K.*

Pfaffmann, Mary, & **Stern,** Frances. How to teach nutrition to children. Revised edition. Barrows, New York, $2.

Forecast, April 1943, p.58. 1 col.

"Teachers who are endeavoring to make the subject of nutrition come alive to children, and not finding the task an easy one, will welcome this book as a timely source of ideas for workable procedures. The authors are path-breakers in the special branch of nutrition they have made their own . . . Each lesson is developed by means of stories, charts, pictures, games, handwork and class projects—all geared closely to the level of mental development and activities of children of the intermediate grades. With slight adaptations, any experienced teacher could readily adapt the lessions [sic] to classes of practically any age level, from the very young child right up to the adult, and for any type of organization."

Plunguian, Mark. Cellulose chemistry. 104p. 1943. Chemical Pub., Brooklyn, $2.25.

Canadian chemistry and process industries, March 1943, p.170, 172. ⅓ col.

"Well illustrated and presents much interesting informative material under the following chapter headings: Cellulose and Associated substances; Microstructure of Cotton and Wood Fibres; Isolation and Purification of Cellulose; General Properties of Cellulose; Dispersion of Cellulose: Derivatives of Cellulose; Modified Cellulose; Constitution of Cellulose; and Micellular Structure of Cellulose."

Paper industry and paper world, April 1943, p.101. ⅛ col.

Paper trade journal, March 18, 1943, p.34. 7 l.

"Written largely for the chemist beginning in the field of working in allied fields."

Products finishing, March 1943, p.20. ⅓ col.

"Designed primarily to meet the requirements of noncellulose chemists for a brief and up-to-date introduction to the chemistry of cellulose. An effort has been made to achieve a comprehensive outline of modern cellulose chemistry through a concentration of pertinent detail."

Rayon textile monthly, April 1943, p.92. ⅓ col.

Polowe, David. Navigation for mariners and aviators. Ed.2, revised. 528p. 1942. Cornell Maritime Press, New York, $5.

Aviation equipment, March 1943, p.122. 11 l.

"A general treatment of the problem and science of navigation . . . written by Capt. David Polowe, a master mariner and instructor of navigation at Columbia University. It carries a history of the navigation compass, cross bearings, distance finding stations, a chapter on sidderial [sic] time, excerpts from the nautical almanac, a complete set of tables for every phase of navigation . . . Has an index and is very well illustrated."

Poulton, G., & **Brook,** E. H. C. Personnel management. 48p. P.W.S. (Industry), Ltd., Bishopsgate, London, E.C.3, 6s.

Electrical review, March 12, 1943, p.348. 12 l.

"After being to a large extent ignored for so long, the importance of the human factor in the operation of factories is becoming more and more recognised. Information available on the organisation of personnel management is very scanty and in the past it has been left largely to the initiative and ingenuity of individuals to prepare their own schemes. This book, which is claimed to be the first attempt at a comprehensive definition of what the establishment of a personnel department implies, should therefore prove of great practical value." *W. R. C.*

Industrial chemist, March 1943, p.178. ⅝ col.

"Defines the duty of the personnel manager and the various departments under his control . . . The authors examine the duties of the personnel manager . . . and thoroughly tabulate all points which should receive his attention . . . The problem of selection of personnel is briefly described . . . Finally, the need for active co-operation between departments is stressed and care is taken throughout to indicate where liaison is desirable and to which specialist authority should be delegated when overlapping of function may occur."

Pratt, Fletcher. Navy has wings. 240p. Harper, New York, $2.75.

Aero digest, March 1943, p.509. ½ col.

"A qualified expert on naval affairs has written this story of U. S. Naval Aviation and the

men who make up its personnel—the pilots, navigators, bombardiers, radio operators and the men who keep 'em flying. The emphasis throughout is on the men who fly for the Navy—this personal factor is more important than any other. The book tells how they live, what they do, what they think and talk about, their methods of operation, the machines they handle, and, above all, the exacting methods by which they are trained."

Rathbone, A. D., IV. He's in the paratroops now. 190p. 1943. McBride, New York, $2.50.

Aeronautical engineering review, March 1943, p.107. ⅝ col.

"The author takes the reader through the routine life and training of a paratrooper and describes the many weapons that he must be able to use. A brief history of the parachute gives the background of the employment of this military accessory that is used by the 'cold jugs.' The illustrations are well chosen and show the varied activities of this colorful division of the Army."

American aviation, April 15, 1943, p.30. ½ col.

Scientific American, April 1943, p.186. ⅓ col.

"Vicariously, the text of this book gives the reader all the thrills of parachute training and jumping, without any of the ardous [sic] physical regime [sic] that accompanies the actual work. Thus, parents, relatives, and friends of paratroopers will, by reading this book, gain something of an equal footing with the paratrooper himself; youngsters approaching service in the armed forces may find it the deciding factor in choosing their place in the military world. From breakfast on the first day of service in the paratroopers, the reader is taken through the whole course of training to the final lessons in hand-to-hand fighting and the other secrets of the training that are so essential in modern warfare." *A. P. P.*

Raushenbush, Winifred. How to dress in wartime. 198p. c1942. Coward-McCann, New York, $2.

Rayon textile monthly, Feb. 1943, p.84. ⅓ col.

"An unofficial version of the official point of view on civilian clothes and is based on interviews with Government department and Bureau heads in Washington, D. C. It forecasts the possible introduction of a cut in clothing of 50 per cent; clothes rationing; measures close to mandatory labeling and elimination of luxury clothes as well as sleazy, non-durable clothes. There are chapters discussing the wool and rubber shortage, stockings, foundation garments, *Textiles Particularly Synthetics and Dyes* . . . Has much direct value to the consumer and to those textile mills and organizations, who advertise directly to the consumer."

Reck, Franklin M. Radio from start to finish. 160p. Crowell, New York, $2.

Radio-craft, March 1943, p.383. ½ col.

"When did Marconi make his trans-Atlantic broadcast? When did modern broadcasting start? What's this FM business and how does it work? Questions like these, by the hundred are found answered in this compact little book. We hear a lot about Maxwell these days, and Armstrong, and DeForest. Their stories are told here, in very interesting style, with plenty of illustrations of persons, events, and apparatus. What all this amounts to is that here you have a snug little history of radio as regards engineers, entrepreneurs and industries connected with it. For the young lad (or girl), thinking of a future in radio the author outlines, rather tells, most interestingly, about what goes on in a broadcasting studio, describing the duties and functions of the entire personnel . . . Packed with interesting things . . . It should be in the library of everyone connected with radio."

Resistance Welder Manufacturers' Association. Resistance welding manual. 286p. The Association, Philadelphia, $2.50.

American machinist, April 1, 1943, p.135. ⅜ col.

"The recognized need for an accurate, comprehensive and practical reference book in which factual data about resistance welding processes are made readily available, resulted in publication of this new manual . . . The material is illustrated with half-tones, line drawings, wiring diagrams and statistical graphs. Essential tables are distributed through the text at appropriate places. The index, however, would seem to be inadequate for a reference volume."

Modern machine shop, April 1943, p.354, 356. 1 col.

Steel, March 8, 1943, p.143. ¼ col.

"Co-operation of the American Welding Society allowed inclusion of chapters from its 1943 handbook as a separate reference manual. The manual includes discussion of fundamentals of resistance welding, processes utilizing this class of welding, machines used, controls and timing devices, electrodes, holders and conductors, definitions and symbols."

Reyner, J. H. Testing radio sets. Ed.3. 236p. Sherwood Press, Cleveland, $4.50.

Radio-craft, April 1943, p.447. ⅜ col.

"A highly practical work written by a man who obviously knows what he is talking about, one who is obviously an engineer as well as a serviceman. Due to the differences between British and American receivers his instructions in detail are in many cases not applicable; but his fundamental methods could be imitated with profit by many servicemen who ask: 'What is the trouble? All the parts test O.K.' . . . An important part of the book is the section dealing with laboratory tests of receivers. Here the equipment described is by no means crude, and the intelligent serviceman should get several hints from the manufacturers' methods of checking sets for performance. Much of the apparatus described can be built by the amateur engineer . . . A worthwhile text for those familiar with British practice."

Radio news, April 1943, p.36. ⅜ col.

"Serves as a handy reference for students, laboratory workers and servicemen, covering as it does practically any conceivable circuit test. It may be referred to when setting up equipment and in determining operating characteristic from the information supplied."

Rittenberg, David. See **Schoenheimer,** Rudolph.

Roberts, Joseph K. Annotated geological bibliography of Virginia. 726p. 1942. Alderman Library, Charlottesville, Va. (University of Virginia bibliographical series, no. 2.)

American mineralogist, March 1943, p.213. ½ p.

"The author of this comprehensive work has been abstracting and assembling the geological literature of Virginia for a period of over twenty years. The results of this time-consuming effort are now made available through the publication of this volume . . . All phases of Virginia's geology are covered with the exception of soils and climate . . . Dr. Roberts is to be congratulated on the completion of this splendid work. Students of Virginia geology will find it a great time-saver and therefore indispensable as the abstracts are given in sufficient detail as to make consultation of the original papers unnecessary, in most instances." *W. F. H.*

Robinson, P. H. Aircrew's book of practical mathematics. 149p. 1942. Chemical Pub., Brooklyn, $1.50.

Aeronautical engineering review, March 1943. p.103. 12 l.

"In writing this book the author's object was to provide aircraft pilots, observers, and ground staffs with a knowledge of the essentials of the various mathematical subjects required in their work . . . Intended for a home-study course and each step is carefully explained with exercises of a practical nature. The reader is not expected to have any previous knowledge of mathematics. This is one of a series of observer's books for aircrews."

Rockefeller Institute for Medical Research. Virus diseases. 170p. 1943. Cornell Univ. Press, Ithaca, N. Y., $2.

American journal of public health, April 1943, p.448. 1 col.

"The material . . . presented is concise and clear-cut. Although dealing with only a small portion of the complicated virus field, the data have been well digested and to some extent may prove more valuable to workers interested in virology than some of the larger more comprehensive volumes in the same field, which are entirely lacking in critical analyses and offer unselected masses of facts . . . Particularly useful, because the work has been covered by competent specialists in each subject . . . Virologist and newcomers to the field will find *Virus Diseases* helpful for one reason or another. Although it must be used in conjunction with some of the larger texts in the field it is a necessary and valuable adjunct." *Murray Sanders.*

Rogers, J. Speed, and others. Man and the biological world. 607p. 1942. McGraw. New York, $3.50.

American naturalist, March-April 1943, p.178. 12 l.

"Presents with even balance the whole array of fundamental biological principles. The human aspect is stressed, but without undue emphasis. The frank viewpoint on such problems as evolution and sex is especially commendable. 'Man and the Biological World' is not only an excellent text for a year's course in biology; it will also serve well as an elementary biological reference work in schools and home libraries."

Rolo, Charles J. Radio goes to war. 293p. 1942. Putnam, New York, $2.75.

Electronics, March 1943, p.320. ½ col.

"Technicians in electronics are well acquainted with the military use of radio in the field, on ships and in planes. However, one very effective use of radio as an offensive weapon usually receives little or no attention. This use is on the propaganda front. This is the subject of Mr. Rolo's well-written book. In twenty-three interesting chapters he tells how the enemy is using radio propaganda, how we have come to realize its importance, and hoy [sic] we are retaliating in kind . . . Radio as a propaganda weapon is gaining in importance every day. This book tells how and why. It is heartily recommended. Mr. Rolo's informal style makes interesting reading. The chapter on secret radio stations is especially good." *E. E. G.*

Ryerson (Joseph T.) **& Sons, Inc.** Aircraft alloy steels. The Company, Chicago.

Iron age, April 1, 1943, p.141. ½ col.

"Designed as a practical guide to aircraft steel stocks, prices, sales limitations, and specifications . . . In addition to the listings of available steels, this publication furnishes a condensed version of all the Aeronautical Material Specifications (AMS) which pertain to steel. These AMS specifications, originally developed by the Society of Automotive Engineers, are presented in brief tabular form to serve as a quick guide for the identification of the essential requirements of each specification. The Army Navy Aeronautical Specification (AN-S and AN-T), which cover the new NE National Emergency Steels acceptable to the aircraft industry, are also condensed in tabular form."

St. Clair, Labert. Transportation since time began. Revised edition. 349p. Dodd, New York, $2.75.

Railway age, April 3, 1943, p.683. ¼ col.

"In undertaking to cover the field indicated in the title — especially since a passing glance at the future is included as well — the author has had to content himself with hitting the high spots in the development of land, water and air transportation from prehistoric times to the present. In order to give an account in the space of 63 pages of the expansion of ways and means of travel by water through the centuries — from the floating log to the luxury liner — it has been necessary to winnow the essential elements of the story from an immense mass of fact and legend. The account of the different forms of land transportation, past and present, which is almost as brief, touches upon a wide variety of vehicles, strange and familiar — ranging from sledge to jinrikisha, from chariot to victoria — as well as on the early, intermediate, and modern forms of bicycle, automobile, and railway train."

St. John, Ancel, & **Isenburger,** H. R. Industrial radiology; x-rays and gamma rays. Ed.2, revised. 298p. 1943. Wiley, New York. $4.

American machinist, April 1, 1943, p.135. ½ col.

"Aimed at students, laymen and engineers who want to know something of the basic theories involved in the subject. No attempt has been made to produce a scientific treatise. However, the subject is given a full treatment. The first several chapters give the history of X-ray development, a detailed though not exhaustive summary of the physics involved, and a description of the types of equipment used. The last half of the volume discusses the problems in radiography raised by different types and shapes of work. The material is clearly presented and adequately illustrated. A bibliography containing 1,314 items is included."

Aviation, April 1943, p.321. ⅜ col.

Marine engineering and shipping review, March 1943, p.212. 8 l.

"In order that students, laymen and engineers may obtain a useful knowledge of the basic theories involved in industrial radiology the authors of this book have presented its practical aspects without attempting to produce a scientific treatise. The revised edition contains new material on equipment and accessories and describes the latest developments and improvements in tools and technique in a clear and concise manner."

Welding journal, April 1943, p.273. ⅜ col.

"Intended to furnish in readable form authoritative information concerning the practical use of radiology for industrial service . . . Presents not only the general principles governing the production and use of x-rays and gamma rays but also the special technique suitable for important classes of materials used by industry . . . Some of this material is here published for the first time . . . For the convenience for those who may desire to pursue the subject more extensively, a bibliography of pertinent literature has been appended."

Sargent, Theodore C. See **Des Jardins.** Russell T.

Schoenheimer, Rudolph. Dynamic state of body constituents; revised by David Rittenberg, and others. 78p. 1942. Harvard Univ. Press, Cambridge, Mass., $1.75.

Ohio state medical journal, March 1943, p.300. 11 l.

"The final revision . . . of the draft of lectures prepared by the author shortly before his untimely death. The author in his characteristic fashion has correlated pertinent facts from many highly diversified branches of knowledge and brought them to bear on this subject, the dynamic state of body fats, proteins. It is a most stimu-

lating book for the practitioner who needs to get the viewpoint that nothing he deals with is ever static."

Quarterly review of biology, March 1943, p.96. ½ col.

Schuhler, Albert A. Electric wiring. Ed.4. 400p. 1943. McGraw, New York, $2.50.

Science counselor, March 1943, p.23. 12 l.

"Any book which has reached a fourth edition has demonstrated its worth. Even a brief examination shows why this textbook of applied electricity for vocational and trade schools has been successful. The general plan, and the selection and presentation of material show that the author is an experienced worker and a skillful teacher. The book is wholly practical and does not deal with theory any more than is absolutely necessary. The several Units study the wiring of bells, annunciators, and burglar alarms, and with electric light, telephone and telegraph wiring. One unit is devoted to testing, and to the location of trouble." *A. K.*

Schultz, Richard S. Wartime supervision of workers. 206p. Harper, New York. $2.25.

American machinist, March 4, 1943, p.140. ⅔ col.

"To meet the demand for more and more supervisory employees in our expanding wartime industries, this new book offers some practical methods for the discovery and development of foremen and supervisors. The general problem is presented in the first three short chapters which touch on the changes that have come in supervision methods, the ways of passing on the 'know how,' and the qualifications of a good supervisor . . . The book ends with a selected, chapter-by-chapter bibliography."

Factory management and maintenance, March 1943, p.233. 10 l.

"Placing at the disposal of every man responsible for getting out production, from foreman to top executive, the answers on how to handle the human factors that influence the speed of output. Information is the result of a coast-to-coast survey that included superintendents, factory managers, and staff personnel. Presented by the question-and-answer method are one hundred problems which affect good morale and top performance."

Selvidge, R. W. See **Castle**, Drew, W.

Sewell, W. E. Degree of approximation by polynomials in the complex domain. 236p. 1942. Princeton Univ. Press, Princeton, N. J., $3. (Annals of mathematics studies, no.9.)

Mathematical reviews, March 1943, p.78. 1⅔ col.

"Primarily a systematically integrated account of recent research by the author . . . in collaboration with J. L. Walsh, on the subject indicated by the title of the book . . . There is evidence of composition under pressure of time in minor errors or inaccuracies of expression, by which the reader should not be unduly disturbed. It is the reviewer's impression that these are rather numerous, but not serious in general effect. The detailed exposition is supplemented by exercises and a sketch of open problems in connection with each chapter, and by a bibliography." *D. Jackson.*

Sherman, Henry C., & **Lanford**, C. S. Essentials of nutrition. Ed.2. 442p. 1943. Macmillan, New York, $3.50.

Journal of the American Dietetic Association, April 1943, p.288. ⅓ col.

"Intended as a more or less elementary text presenting an up-to-date view of the essentials of nutrition . . . The contents . . . can be unquestionably accepted as sound. Even though it is written for the beginner in the science of nutrition and dietetics, it can be read with profit by dietitians and nutritionists who wish to be up to date on the proper emphases with which to present a given phase of the subject of nutrition."

Shiepe, Edward M. Inductance authority. 50p. Gold Shield Products, New York, $2.50.

Radio, March 1943, p.50. ⅔ col.

"This book, composed principally of charts, dispenses with the usual paper work necessary for computing the physical characteristics of solenoid coils for tuning with variable or fixed condensers of any capacity, from the ultra-high frequencies to the borderline of audio frequencies. An accuracy of 1 per cent is claimed." *M. L. M.*

Radio news, April 1943, p.69. ⅔ col.

"Dispenses with any end all computation for the construction of solenoid coils for tuning with variable or fixed condensers. It includes the ultra frequencies to the border line of audio frequencies . . . Contains all the necessary information to give the final wire on coil construction to servicemen engaged in replacement work, home experimenters, short wave enthusiasts, amateurs, engineers, teachers, students, etc. Ten pages of textual discussion by Mr. Shiepe, graduate of the Massachusetts Institute of Technology and of the Polytechnic Institute of Brooklyn, are included."

Shuman, John T., and others. Fundamental shop training for those preparing for war service. 327p. 1943. American Technical Soc., Chicago, $2 (Workbook, 50c.). (Victory preinduction training series.)

American machinist, March 4, 1943, p.141. ⅔ col.

"Designed to help train part of the 63 out of every 100 selectees in our mechanized army who are assigned to specialized tasks. The book starts from scratch with the nontechnical man. The first sections identify common hand tools and introduce such simple bench operations as chipping, filing, scraping and tapping . . . The material is presented in very simple form so that it may be used by the individual as well as in the classroom. A number of handy rules and tables are included at the end, among them tables of drill and screw sizes, Morse tapers, and board measure."

Rubber age, March 1943, p.532. ⅔ col. including other reviews.

Skrotzki, B. G. A., & **Vopat**, W. A. Principles of applied energy conversion. 2v. 236p. 1942. Cooper Union Supply Store, New York, $3.25.

Power, March 1943, p.122, 156. ⅔ col.

"Written as a text for engineering students, this book should also prove of interest to practicing engineers desirous of learning more about the fundamental principles underlying the art of power-plant engineering. Throughout, the authors emphasize principles and functions; details of design and construction of equipment are included only as necessary to illustrate essential principles. This concentration on essentials makes it possible to cover, in a relatively brief text, all phases of energy conversion — steam power, diesel [sic]- and gas-engine power and hydroelectric power."

Sloane, Eric. Camouflage simplified. 63p. 1942. Devin-Adair, New York, $2.50.

Aeronautical engineering review, Feb. 1943, p.95. ⅔ col.

"By means of text and numerous drawings, the author explains in nontechnical language the various methods of disguising objects for the purpose of deceiving enemies and protecting properties and people against attack, principally air attack . . . The use of color, shadow, texture, planting, coverings, structures, and other methods of disguise are discussed, and information is given on means for outwitting the enemy's aerial observation and aerial photography. Suggestions are also made on what should not be done, since

some attempts at camouflage serve to attract attention and make the target easier to find. Although not strictly a part of camouflage, chapters are devoted to protective blankets, sandbags, and other means for lessening the effects of bomb explosions."

Spoerri, P. E., and others. Principles and practice of qualitative analysis; with semi-micro laboratory technique. 282p. 1942. McGraw, New York, $2.75.

Journal of chemical education, March 1943, p.155. 1 col. including another review.

"Designed for a brief course in qualitative analysis employing semimicro laboratory technic . . . Teachers who worry about the development of a 'cook book' attitude on the part of their students may possibly find that with this book the student will need to possess much more initiative and enterprise than is usually required and that he will develop habits of scientific thought which he will retain long after he has forgotten the details of the analyses. If this is accomplished, the aims of its author will have been achieved." *Laurence S. Foster.*

Spriegel, William R., & **Schulz,** Edward. Elements of supervision. 273p. 1942. Wiley, New York, $2.25.

Industry and power, April 1943, p.166. ⅛ col.

"Absenteeism, employe training, waste control, up-grading of workers, quality control, and safety are some of the problems discussed in this recent book by two men who have had years of experience in training foremen. Frequent examples are used to illustrate suggested methods of meeting the problems facing supervision. Executives, industrial officials, teachers, and men actually on the job as foremen and production superintendents should find this book useful."

Stack, Herbert J., & **Siebrecht,** E. B. Education for safe living. 378p. 1942. Prentice-Hall, New York, $3.50.

Journal of health and physical education, March 1943, p.192. 6 l.

"This was originally planned as a complete text in safety education, but during these critical times it assumes a new importance. The results of years of effort, experimentation, and research in safety education have now been made available for the educational public. It is a textbook that will be indispensable to teachers, supervisors, and school administrators."

Starr, Victor P. Basic principles of weather forecasting. 299p. 1942. Harper, New York, $3. (Harper's geoscience series.)

Aeronautical engineering review, Feb. 1943, p.91. ⅛ col.

"Intended to give a new approach to the subject and to present methods of procedure not before generally available. Short-period forecasting technique is stressed, but techniques of the Five-Day Forecasting Project of the United States Weather Bureau at Washington also are covered. The author's treatment is particularly concerned with forecasting based on data from a single station rather than from a network of observation posts. This single-station technique is said to be particularly valuable under war conditions where information from a network of observation posts frequently is unobtainable . . . Contains new sets of maps and charts drafted especially for the project."

Sky and telescope, May 1943, p.16. ⅜ col.

Western flying, March 1943, p.138. ⅝ col.

"Devoted exclusively to the principles and problems of weather forecasting, in contrast to the usual textbook in meteorology, this new volume . . . is intended for textbook use in college and university courses in forecasting, and for supplementary use in more extensive meteorological courses."

Stone, John W. Electrical shop. 21p. 1942. Airlines War Training Inst., Washington, D. C.

Aeronautical engineering review, March 1943, p.103. ⅛ col.

"Especially prepared for air-line flight and ground crews. The writer presents a list of the equipment for the use of each group of ten students and also a list of equipment required for examination by the whole class . . . Covers 17 periods of shop work . . . Sketches and circuit diagrams are provided to aid the student in understanding the work."

Stone, John W. Radio operating. 65p. 1942. Airlines War Training Inst., Washington, D. C.

Aeronautical engineering review, March 1943, p.103. ⅛ col.

"Intended for the use of the instructor and student in the classroom, this book presents information on radio operating for aircraft flight and ground crews. It is arranged in the form of lectures covering the radio operator's duties, the Civil Aeronautics Authority and traffic control, Federal Communications Commission and licenses, calling and answering, procedure signs and signals, instrument approaches, the radio check sheet, the tabulated information, maps and charts. Classroom problems and homework are given at the end of each chapter."

Storer, Tracy I. General zoology. 798p. 1943. McGraw, New York, $3.75.

Wilson bulletin, March 1943, p.22. 8 l.

"Ornithologists who want to gain a better understanding of birds in relation to the rest of the animal world will do well to study this admirable new zoology text by the California ornithologist, Tracy Storer. His 37 page chapter on birds is a remarkably clear and concise summary of the whole field of ornithology. Other chapters especially helpful to students of birds are those on ecology, distribution, and organic evolution. We believe that many ornithologists will return to their special bird problems with renewed enthusiasm and vision after a study of this volume." *J. Van Tyne.*

Stubbings, G. W. Automatic protection of A.C. circuits. Ed.3. 320p. Chapman & H., London, 18s.

Electrical review, March 12, 1943, p.348. 9 l.

"Some matter has been added on the interconnection of current and voltage transformers and the phenomenon of 'neutral inversion,' on the protection of machines and cables, and on relay maintenance. References to the most important of the highly-technical papers on automatic protection that have appeared since the last edition have also been included in the bibliography."

Summerill Tubing Company. Aircraft tubing data. The Company, Bridgeport, Pa., $2.

Metal progress, April 1943, p.574. 12 l.

"Unusual in at least one respect: The descriptive matter contains complete discussions — like a series of technical articles — about the manufacture of tubing its bending, welding, inspection and corrosion protection, all by experts in the aircraft industry. As a handbook for designers it contains indispensable tables showing sizes, weights, moments of inertia, and long column loadings permissible for hundreds of sizes in rounds, ovals, streamlines and square tubing."

Swietoslawski, W. Coke formation process and physico-chemical properties of coals. 145p. Herald Square Press Inc., New York, $3.50.

Steel, March 8, 1943, p.136. ½ col.

"The first of a series for the Polish Institute of Arts and Sciences in America. It is the outcome of investigations conducted over a period of years by fellows of the coal division of the Chemical Research Institute of Warsaw. The researches dealt with an examination of physico-chemical properties of coals and with explanations of physico-chemical phenomena which take place in the coke oven."

Teller, Walter Magnes. Farm primer. 266p. McKay, Philadelphia, $2.50.

Practical home economics, April 1943, p.248. ¼ col.

"A practical handbook for the beginner and part-time farmer . . . There are chapters on land and water, houses and outhouses, soil, tools and livestock. There is even a chapter on financing and planning. An appendix gives a time table for chores, gestation table and other pertinent farm information."

Thisell, A. Gideon. Science of watch repairing simplified. 208p. Henry Paulson & Co., Chicago, $3.

Jewelers' circular-keystone, March 1943, p.80-D. ½ col.

"Subjects in addition to escapement work that are treated . . . include: watch cleaning, mainspring replacements, train repairs, lubrication, poising balances, the elements of adjusting to temperature, positions and isochronism, cannon-pinion fitting, and casing . . . The style of Mr. Thisell's writing is concise and clear. However briefly any of the subjects in the book may be treated, what is said bears the touch of authority. This new book is admirably fitted to be of great usefulness to the majority of watchmakers."

Thomas, Joseph Miller. Elementary mathematics in artillery fire. 255p. 1942. McGraw, New York, $3.50.

School science and mathematics, March 1943, p.293. 7 l.

"Presupposes elementary algebra, plane geometry, and plane trigonometry. It is intended as a text for a course of one-half year. There are twelve chapters with headings as follows: Angles, Tables, Some Geometric Theorems, Model Solutions of Triangles, Maps, Location, Parallax, Difference in Level, Trajectory in Vacuo, Range Tables, Probability, and Adjustment Fire. The exposition is phrased in the language of Higher Mathematics." *J. M. Kinney.*

Thompson, Maurice deKay. Total and free energies of formation of the oxides of thirty-two metals. 89p. 1942. The Electrochemical Soc., Inc., New York, $1.

Bulletin of the Electrochemical Society, Inc., Feb. 1943, p.5. 12 l.

"Dr. Thompson has done a stupendous piece of work. While considerable experimental work has been done to determine the energies of formation of metallic oxides it remained for Dr. Thompson to collect and check the vast data. Every electrochemist, engineer and physicist will find this . . . booklet extremely handy and useful . . . The edition is limited."

Thomson, Thomas, & **Jerram,** M. R. K. Outline of forestry. 208p. Nordeman, New York, $2.25.

American forests, March 1943, p.134. ¼ col.

"Written to acquaint students with the kind of knowledge they will need to acquire in the study of forestry. The simple explanation of purpose, value and economics in the practice of forestry will enable them to ask intelligent questions as professional students. In no wise a textbook, this outline will stimulate an interest in forestry as a career and will also aid laymen in obtaining an understandable background of forest conservation and the practice of forestry."

Tupholme, C. H. S. Modern engineering. 201p. 1942. Faber, London, 15s. net.

Nature, Feb. 20, 1943, p.208. 1¾ col.

"The author, within the limits tolerated by security, conducts his reader through many technical developments spread over a wide field. Many of these were introduced before the War, but the exigencies of the latter have forced them beyond the experimental stage, until they can no longer be deemed experimental or even developments, but must be included as regular practice in up-to-date manufacture . . . Because the author is discrete in many of his references and also covers so wide a field, he would often appear scrappy to a particular specialist and perhaps obscure to the inquiring layman. The reviewer would normally direct attention to two important fabrication processes which have been omitted; there are in addition a few misprints. Nevertheless, there is a considerable field of usefulness for this type of book at the present time, and, in this type of survey, the author has discharged his task well with regard to prevailing conditions." *L. E. C. Hughes.*

Twyman, F. Prism and lens making; a textbook for optical glass workers. 178p. Hilger, London, 15s. net.

Engineer, March 12, 1943, p.214. 2 col.

"A welcome addition to the scanty literature of the subject . . . Well suited to the needs of the big and little firm . . . Well written, comprehensive, and concise. It meets very adequately the needs of the optical industry and will be appreciated also by those who are interested in the more scientific aspects of technical optics. Furthermore, it will appeal to those thousands of engineers who like to know how things are made, even though their connection with engineering is not very close. It describes all the processes of lens and prism making in such technical detail that one feels he could make lenses and prisms himself."

Glass, March 1942, p.68. ¾ col.

"Describes the methods actually in use in the shops of Messrs. Adam Hilger, Ltd., whose reputation for the highest quality products is world wide . . . Divided into eleven chapters. It commences with a short historical survey, then follows very detailed information on the polishing processes and the nature of grinding and polishing, continuing with a chapter on the tools and materials in general use. The author then proceeds to give a description of the production of lenses and prisms in quantity, with another chapter on finishing the lenses, centering, edging and balsaming, and one on the making and working of prisms. Some 30 pages are devoted to the testing of optical work, a short chapter on microscope lenses, and then details of the testing of optical glass . . . The value of the volume is enhanced by the number of illustrations, both diagrams and photographs, and an excellent name and subject index."

Vesselo, I. R., & **Morrison,** R. D. Radio. 1942. Allen & Unwin, London, 2s. (Air cadets' handbooks series.)

Journal of the Royal Aeronautical Society, March 1943, p.106. ½ col.

"The first 50 pages give an outline of Electricity and Magnetism, followed by an explanation of radio valves and some typical transmitters and receivers. In the last two chapters we have a brief description of the principles of aircraft radio; fixed and trailing aerials, direction-finding, and a few notes on the plotting of radio bearings and the errors to which they are subject."

Weems, P. V. H., & **Eberle,** W. C. Learning to navigate. Ed.2, revised. 135p. Pitman, New York, $2.

Western flying, March 1943, p.138. 12 l.

"An entirely new and complete chapter on Air Navigation and an important new one on Piloting and Dead Reckoning have been added. This book is organized for teaching or self-study, with questions at the end of each chapter. It is a practical handbook which should appeal to anyone with the desire to learn more about the fundamentals of air or sea navigation."

Wesson, Laurence G. Outline of the chemistry of dental materials. 106p. 1942. Mosby, St. Louis, $1.50.

Science, April 2, 1943, p.312. ⅝ col.

"Contains a concise review of some of the

properties and uses of materials employed in dental practice. The chemical changes which many of these materials undergo and their effects on the oral tissues are clearly, although briefly, described . . . The dental section of the book is preceded by an elementary review of some of the principles of chemistry. Although brief, this material should be helpful to the dental practitioner. The descriptions of such topics as the nitrogen cycle and the potential acidity and alkalinity of food, although of general interest, could well have been omitted in a book of this type. This outline should also prove useful as a supplementary text in courses for dental hygienists." *Maxwell Karshan.*

Westinghouse Electric & Manufacturing Company. Wartime conservation. 94p. 1943. The Company, East Pittsburgh, Pa., gratis unbound.

Food industries, April 1943, p.103. ¼ col.

"How to conserve critical materials in the selection, application and use of electrical equipment in industry is told in this booklet. And there are suggestions as to how to get more production from present equipment. All types of equipment — distribution systems, motors, relays, transformers, lights and other units — are covered. While . . . written specifically for Westinghouse equipment, and the specific data are for that make, many of the principles involved in the suggestions apply to electrical equipment in general."

Whitman, Helen M., comp. Try growing herbs. Tool Shed Press, Bedford, N. Y., $1.

American forests, April 1943, p.184. ¼ col.

"The art of growing and using effectively a wide variety of culinary herbs — age-old in Europe and one of the secrets of skilled continental cooks — is a newer art in America. To help stimulate its development, and because the global war has cut off many importations of herbal materials, this little handbook for experimenters in this field was prepared. Forty-seven herbs are listed, largely former imports, the future of which is now uncertain. And a valuable feature of the book is that the opposite page, facing the concise information listed on the individual herb, is in blank to hold the record of the experimenter."

Wright, Anna Allen, & **Wright,** A. H. Handbook of frogs and toads. Ed.2, revised. 286p. 1942. Comstock Pub. Co., Ithaca, N. Y., $3.

American naturalist, March-April 1943, p.180. 9 l.

"Bountifully illustrated and enthusiastically written, this book has been prepared for and by naturalists. It should be useful too for the many experimental biologists who employ amphibians in their researches. Systematists will criticize the lack of consistency in the nomenclature of typical subspecies: some are designated by the species binomial, thus usurping the name that properly belongs to the whole species complex; others are correctly accorded the tautonymic trinomial."

Animal kingdom, March-April, 1943, p.47. 1 col.

"Recommended for the scientist or amateur student who is interested in the delightful, droll creatures of our swamps, streams, lakes, and fields that are known as frogs and toads." *J. Tee-Van.*

Fauna, March 1943, p.32. ½ col.

"Each of the ninety-eight species and subspecies of frogs and toads known to occur in the United States and Canada is discussed in detail, and each is accompanied (with a few exceptions) by a panel of photographs showing such features as eggs, tadpoles, and views of adults taken from various angles. A typical discussion includes a list of common names, the accepted scientific name, range, habitat, size, general appearance, structure, voice, breeding habits, and notes on natural history. As a general reference book and as a guide for the amateur naturalist who, at this time of year, is bound to be much interested in the 'voices of spring' and the amphibians that possess them, this volume is highly recommended."

Scientific monthly, April 1943, p.377. ⅜ col.

"The authors, drawing from the works of a half hundred other authorities, and combining with their own intensive observations made over many years, present a handbook that is completely what the name implies . . . To teachers, students and naturalists, for whom the work is designed, it is a most important contribution to our list of works on Amphibia." *W. M. Mann.*

Yerkow, Charles. Modern judo. 195p. Military Service, Harrisburg, Pa., $2.

Military engineer, March 1943, p.158. ¼ col.

"Represented as a complete manual of close combat fighting according to the scientific, basic principles of Japanese Judo. It deplores the teaching of mere tricks to commandos, without teaching also the fundamentals, the thrusts and counter-thrusts. It is profusely and well illustrated. It reminds us of Academy days when 'There ain't no holt that can't be broke' used to ring in our ears. For after all, wrestling is a type of infighting, only much more sportsmanlike."

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